Groundwater Monitoring Report
March–May 2013
Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland

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ACRONYMS

ASTM	ASTM International
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, xylenes
COC	chain(s) of custody
cVOC	chlorinated volatile organic compound
1,1-DCE	1,1-dichloroethene
cis-1,2-DCE	*cis*-1,2-dichloroethene
DPT	direct-push technology
DO	dissolved oxygen
ESA	environmental site assessment
ft/d	feet per day
g/d/ft	gallon(s) per day per foot
GIS	geographic information system
GLM	Glenn L. Martin Company
gpm	gallon(s) per minute
IDW	investigation-derived waste
LMCPI	LMC Properties, Inc.
Lockheed Martin	Lockheed Martin Corporation
MDE	Maryland Department of the Environment
MIP	membrane-interface probe
µg/L	microgram(s) per liter
ml/min	milliliter(s) per minute
MRAS	Middle River Aircraft Systems
MRC	Middle River Complex
MSA	Martin State Airport
msl	mean sea level
MTBE	methyl *tert*-butyl ether
NAA	natural attenuation assessment
NPDES	National Pollutant Discharge Elimination System
ORP	oxidation-reduction potential
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PDF	portable document format
PM	project manager

QA/QC	quality assurance/quality control
RAP	response action plan
REC	recognized environmental condition
SC	soil conductivity
SIM	selected ion monitoring
SVOC	semivolatile organic compound
TB	trip blank
TCE	trichloroethene
Tetra Tech	Tetra Tech, Inc.
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VC	vinyl chloride
VOC	volatile organic compound

Section 1
Introduction

This groundwater monitoring report summarizes the March–May 2013 groundwater sampling round at the Lockheed Martin Corporation (Lockheed Martin) Middle River Complex (MRC) in Middle River, Maryland. Figure 1-1 shows the location of the Middle River Complex. Sampling was conducted to provide a current round of groundwater levels and chemical data for selected wells as part of ongoing environmental investigations at the facility. These data will be used to better understand the nature and extent of chemical contamination in groundwater, evaluate the trends of on-site groundwater chemical plumes, and evaluate the natural attenuation of groundwater chemicals of concern at the Middle River Complex. Groundwater samples were analyzed for volatile organic compounds (VOCs), 1,4-dioxane (a semivolatile organic compound [SVOC]), polychlorinated biphenyls (PCBs), metals, natural-attenuation assessment (NAA) parameters, and perchlorate. Additionally, all wells were inspected during the sampling program to assess the need for repairs. Thirty-six wells were repaired in 2013. This report is organized as follows:

Section 2—Site Background: Presents an overview of the site and subsurface conditions observed in the field during previous investigations, and describes the regional and site-specific geology and hydrogeology, as determined from soil borings advanced at the site and from the scientific literature.

Section 3—Investigational Approach: Presents the technical approach to the investigation and describes the field methodologies used.

Section 4—Investigation Results: Presents the investigation results.

Section 5—Summary: Summarizes the investigation findings.

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



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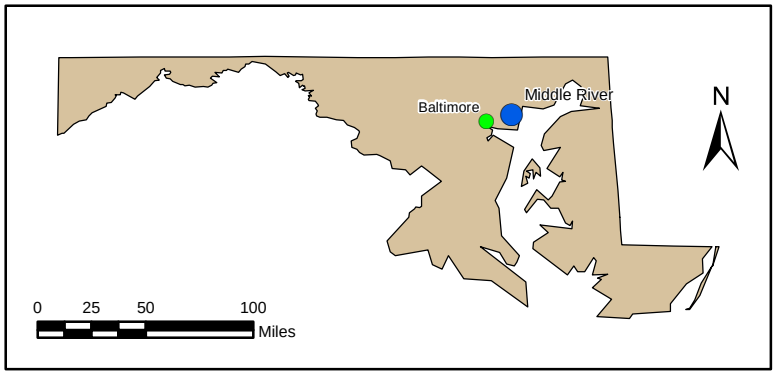

FIGURE 1-1

MIDDLE RIVER COMPLEX LOCATION MAP

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
5/1/13	MP

TETRA TECH

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Section 2
Site Background

2.1 MIDDLE RIVER COMPLEX BACKGROUND

The Middle River Complex (MRC) is part of the Chesapeake Industrial Park at 2323 Eastern Boulevard in Middle River, Maryland, approximately 11.5 miles northeast of downtown Baltimore. It comprises approximately 161 acres, including 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a vacant concrete lot, trailer and parts storage lot, and numerous grassy spaces along its perimeter. It is bounded by Eastern Boulevard (Route 150) to the north, Martin State Airport (MSA) to the east, Dark Head Cove to the south, and Cow Pen Creek to the west. Figure 2-1 is a map showing the MRC layout.

MRC is owned by LMC Properties, Inc., (LMCPI) a subsidiary of Lockheed Martin Corporation (Lockheed Martin). Currently, LMCPI's primary activities at the MRC are facility and building management and maintenance. The main tenant at the site, MRA Systems, Inc., (MRAS) (a subsidiary of General Electric Company) designs, manufactures, fabricates, tests, overhauls, repairs, and maintains aeronautical structures, parts, and components for military and commercial applications. Lockheed Martin Mission Systems & Training (a Lockheed Martin business segment) conducts engineering and fabricates, assembles, tests, and otherwise supports vertical-launch systems. Applied NanoStructured Solutions LLC (a subsidiary of Lockheed Martin) also occupies a portion of MRC and is engaged in research and design of nanotechnology applications.

2.1.1 Middle River Complex History

In 1929, the Glenn L. Martin Company (GLM), a predecessor entity of Lockheed Martin, acquired large parcels of undeveloped land in Middle River, Maryland, to manufacture aircraft for United States government and commercial clients. In the early 1960s, GLM merged with American-Marietta Company to form Martin Marietta Corporation. Around 1975, the adjacent eastern airport area (currently MSA), comprised of approximately 750 acres, was transferred to the State of Maryland. In the mid-1990s, Martin Marietta Corporation merged with Lockheed to

form Lockheed Martin Corporation. Shortly after the merger, General Electric Company acquired most of Lockheed Martin's aeronautical business in Middle River, and MRAS began operations at the site.

2.1.2 Middle River Complex Characteristics

2.1.2.1 Current and Surrounding Land Use

The MRC is an industrial facility surrounded primarily by commercial, industrial, and residential establishments. Six facilities adjacent to the MRC comprise the remaining portion of the Chesapeake Industrial Park. These include Tilley Chemical Company, Inc. (a food- and pharmaceutical-chemical distributor), North American Electric, Inc. (an industrial and commercial electrical contractor), Johnson and Towers (a heavy-duty automotive and boat repair and maintenance company), Ace Logistics, Exxon (a gasoline filling station and convenience store), and the Middle River Post Office. Residential developments are on the opposite shores of Cow Pen Creek, Dark Head Cove, and Dark Head Creek, and north of Eastern Boulevard (Route 150).

2.1.2.2 Physiography

The MRC is in the Western Shore of the Coastal Plain physiographic province, which is generally characterized by low relief. MRC topography slopes gently, ranging from sea level to 32 feet above mean sea level (msl) (Cassell, 1977). The topography slopes from Eastern Boulevard to the southwest and south toward Cow Pen Creek and Dark Head Cove.

2.1.2.3 Hydrology

The MRC is at the junction of Cow Pen Creek and Dark Head Cove. Both of these surface water bodies discharge into Dark Head Creek, a tributary to Middle River, which is a tributary to Chesapeake Bay. The MRC is approximately 3.24 miles (17,100 feet) upstream of Chesapeake Bay.

The MRC has no surface water bodies on site. Excluding areas immediately adjacent to Cow Pen Creek and Dark Head Cove, surface-water runoff discharges from the facility via storm drains. LMCPI maintains a National Pollutant Discharge Elimination System (NPDES) permit (state discharge permit No. 00-DP-0298, NPDES No. MD0002852). This permit is issued by the Maryland Department of the Environment (MDE) Water Management Administration Industrial

Discharge Permits Division. The permit covers stormwater discharge from the entire property, rather than from individual tenants.

2.1.2.4 Soils

Soils underlying the MRC have been mapped by the United States Department of Agriculture (USDA) Soil Conservation Service as Mattapex-Urban Land Complex and Sassafras-Urban Land Complex (USDA, 1993). Mattapex-Urban Land soils consist of deep, well-drained, silty soils, the original texture of which has been disturbed, graded over, or otherwise altered. Sassafras-Urban Land soils consist of deep, well-drained sandy soils, the original texture of which has been disturbed, graded over, or otherwise altered. Site characterization studies indicate that most soils at MRC are fine-grained (e.g., silt and clay) soils with low permeabilities.

2.1.2.5 Regional Geology

Geologic maps of Baltimore County show that the MRC is underlain by the Potomac Group, a Cretaceous-age interbedded gravel, sand, silt, and clay unit that can be up to 800 feet thick in some areas of Maryland. The Potomac Group is composed of three units: the Raritan and Patapsco Formations, the Arundel Clay, and the Patuxent Formation. The Raritan and Patapsco Formations can be up to 400 feet thick and are composed of a gray, brown, and red variegated silt and clay unit with lenses of sand and few gravels. The Arundel Clay is composed of dark gray and maroon lignitic-clays ranging from 25 to 200 feet thick. The Patuxent Formation is described as a white or light gray to orange brown, moderately sorted sand unit with quartz gravels, silts, and clays up to 250 feet thick.

Lithologic logging of the soils beneath the MRC has identified a very heterogeneous stratigraphy. Underlying soils are composed primarily of silty sands, fine-grained to medium-grained sands, silty clays, clayey silts, and plastic clay, with the primary lithology being clay to silty clay. Areas along the waterfront have been back-filled to their present elevation over past decades.

2.1.2.6 Regional Hydrogeology

Sand and gravel zones in the unconsolidated surficial deposits, when present, may form an unconfined or water table aquifer system (Bennett and Meyer, 1952). The water table at the MRC generally conforms to the land surface, with the highest water levels in the interior land

areas and the lowest levels at approximately the surface water elevations along the shoreline. The Patuxent Formation is the most important water-bearing formation in the Baltimore area. Industrial wells in the southeastern part of the area, specifically Curtis Bay and Sparrows Point, yield between 500 and 900 gallons per minute (gpm). Transmissivities and storage coefficients in confined portions of the aquifer in these industrialized areas average about 50,000 gallons per day per foot (g/d/ft) and 0.00026 (unitless), respectively.

The Patapsco Formation is also an important water-bearing formation in the industrialized Baltimore area, where it is separated by clay into a lower and upper aquifer. Industrial wells screened in the lower aquifer yield as much as 500 to 750 gpm, with an estimated transmissivity of 25,000 g/d/ft (Bennett and Meyer, 1952). Wells in the upper aquifer yield similar quantities of water, and likely have a higher overall transmissivity because the upper aquifer is thicker than the lower aquifer.

2.1.2.7 Middle River Complex Geology

Specific wells referenced in the following sections are shown in Figure 2-2. Most of the wells sampled have names that include the "MRC" prefix, identifying its location as a well installed at the MRC. However, the "MRC" designation is dropped in this section and thereafter to enhance the readability of this document.

Lithologic data collected as part of the MRC groundwater investigations were used to construct several geologic cross-sections through the property. Figure 2-2 shows the locations of the geologic cross-sections. Figures 2-3 through 2-5 are generalized geologic cross-sections showing the materials encountered during well installation, and include the four deep wells (MW93D, MW94D, MW95D, and MW96D) installed in 2010.

Boring logs indicate complex arrangements of predominantly clay, silty clay, silt, and clayey silt, with smaller, more permeable zones of silty sand and sand. Thick sequences of low permeability clay, silty clay, clayey silt, and silt are found in the northern two-thirds of the MRC. These clayey and silty materials extend from MW03 to the area between MW60 and MW94D.

As shown in Figure 2-3, the lithologic data indicate clay up to 50 feet thick underlying the surficial aquifer at 15 to 60 feet below msl at well MW93D, and 60 to 110 feet below msl at MW94D and MW96D. Below this clay zone is a series of thinner, alternating layers of sand and clay.

Seventy-three feet of continuous clay were encountered at MW93D, beginning at 164 feet below msl and ending at approximately 237 feet below msl. Directly overlying the 73 feet of clay is seven feet of sand, followed by 11 feet of overlying clay and sand layers (clay thickness totaling eight feet) from 146 to 157 feet below msl. Below the 73-feet-thick clay layer is 14 feet of silty and clayey fine sand, followed by 15 feet of clay from 251 to 266 feet below msl. The thickness of the deep clay and interlayer sand/silt (123 feet) is consistent with that of the Arundel Formation (50 to 125 feet) in this area, as reported by Chapelle (1985) and Vroblesky and Fleck (1991). However, the basal altitude of the clay (at 266 feet below msl) is somewhat lower than the altitude (200 feet below msl) reported by Chapelle (1985) and Vroblesky and Fleck (1991).

In the northern portion of the site (Figure 2-3), clay is encountered in the first 25 feet at MW93D, thickening to approximately 40 feet to the south at well MW57 near Building C. Boring logs indicate that this thick upper zone of clayey material terminates to the south along an east–west line formed roughly by MW27, MW25, and MW22. Interbedded sands, silty sands, sandy silts, and silts are encountered south of Buildings A, B, and C (Figure 2-2). Several feet of sandy and silty materials overlie the shallow clay at MW55 and MW57 (Figure 2-3). These sandy and silty materials thicken to the south/southeast near MW60, MW27, MW79, and MW34. The sandy materials are approximately 50 to 60 feet thick between MW27 and MW34, and overlie a lower clay confining-unit at 55 to 60 feet below msl.

In the southwestern portion of the MRC (Figures 2-4 and 2-5), several feet of silty sands and sandy silts are encountered in shallow subsurface soil near wells MW12 and MW56 to the northeast. A lower sandy unit at 50 feet below msl at MW14 appears to be contiguous with sand encountered at MW12 and MW95D to the southwest. The upper silty sand unit and the lower sand unit are separated by approximately 30 to 35 feet of clay and/or silt.

Figure 2-4 also indicates that geologic sequences at well MW95D are similar to those of MW93D. Soil lithology is primarily clay from the ground surface to 50 feet below msl, followed by a thick sand zone (split by clay and silt layers) from approximately 60 feet below msl to approximately 140 feet below msl. Relatively continuous clay was encountered at MW95D at approximately 150 to 226 feet below msl, but a 14-feet-thick sand layer was encountered from approximately

190-204 feet below msl. Thick clay layers are above and below sand units in which all MRC deep wells are screened; as such, these sand zones are considered hydraulically confined.

2.1.2.8 MRC Hydrogeology

Groundwater at MRC is encountered at depths ranging from less than one foot to nearly 18 feet below ground surface (bgs). In the southeast portion of MRC, groundwater preferentially flows southeast within the sandy strata that extend from MW55 and MW57 to the thicker sandy material at MW27 and MW37. Approximately 65 to 70 feet of saturated sandy material lies above the lower confining clay in this area.

The lower portion of the aquifer near MW34 and MW37 is divided by silt and silty clay at 20 to 30 feet below msl. Deeper groundwater may be under hydraulically confined conditions in this area. To the southwest, shallow groundwater flows through the approximately 13–18 feet of saturated sandy and silty materials that extend from MW21 to MW12 and Cow Pen Creek.

Single-well permeability tests (slug tests) were conducted in 2005 at 28 wells selected to represent variability across the site. The average hydraulic conductivity (i.e., soil permeability) reported for shallow wells was low, and ranged from 0.0027 feet per day (ft/d) at MW57 to 1.25 ft/d at MW66A, with an arithmetic average hydraulic conductivity of 0.22 ft/d. These results are consistent with published permeabilities of sand and silt mixtures (Spitz and Moreno, 1996; Halford and Kuniansky, 2002). Lower hydraulic conductivities were reported for shallow wells to the south (MW55A through MW62A) and west (MW52A through MW54A, and MW64A).

Hydraulic conductivity values for intermediate wells (except for MW27B) are more consistent than those of shallow wells, with an arithmetic average of 0.48 ft/d and a geometric mean of 0.22 ft/d. Intermediate-well permeabilities are consistent with published lower values for clean sand or typical values of sand and silt mixtures. Hydraulic conductivities for the deep wells (except for well MW37C) ranged between 0.35 and 9.16 ft/d, with an average hydraulic-conductivity (3.82 ft/d) approximately 10 times higher than the value for the shallow and intermediate zones. The geometric-mean hydraulic conductivity for deep wells is 0.89 ft/d, but if the low permeability at MW37C is eliminated as an outlier, the geometric-mean hydraulic conductivity is 3.02 ft/d.

2.1.2.9 Chemicals of Potential Concern

A risk assessment (Tetra Tech, Inc., [Tetra Tech], 2006) identified trichloroethene (TCE), tetrachloroethene (PCE), vinyl chloride (VC), benzene, and certain metals as the most significant contaminants in groundwater at the MRC. The two largest groups of organic chemicals of concern are chlorinated volatile organic compounds (cVOCs) and petroleum-related hydrocarbons. Chlorinated volatile organic compounds (VOCs) detected include the commonly used solvents PCE and TCE, which degrade into a variety of other VOCs.

Petroleum-based fuels such as gasoline have numerous chemical constituents. Several VOCs associated with fuels are fairly soluble in groundwater and are therefore mobile in the subsurface. The most commonly detected petroleum VOCs at MRC are benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl *tert*-butyl ether (MTBE). 1,4-Dioxane is also a groundwater chemical of concern because it has been detected at concentrations above regulatory limits and advisory criteria set in other states, and is an emerging contaminant nationwide. Maryland currently has no drinking water or groundwater standards for 1,4-dioxane.

Metals were also detected in groundwater at concentrations above MDE cleanup standards at more than one location, and include nickel (30 locations), cobalt (22 locations), beryllium (16 locations), and zinc (five locations). Antimony, thallium, and vanadium exceeded groundwater standards at one location each. The highest concentrations of metals were found mainly in the northwest and center portions of the site, primarily in wells with low pH values (i.e., acidic groundwater with pH less than 5).

2.2 PREVIOUS INVESTIGATIONS

This section summarizes groundwater investigations at the MRC to date. Investigations related to MRC groundwater began in 1988 and are ongoing. The MRC *Groundwater Response Action Plan* (Tetra Tech, 2012a) was finalized in 2012. Construction of the groundwater remedies for Tax Blocks E, G, and I began in early summer 2013. Discussions of soil data are in documents for the individual tax blocks.

2.2.1 1988 Chromium Investigation

A groundwater investigation in August 1988 evaluated the presence of chromium immediately west of Building A (Earth Engineering and Science, Inc., 1988). Six borings were installed, three

of which (B-2, B-5, and B-6) were completed as groundwater monitoring wells screened from 10 to 20 feet below grade. Hexavalent chromium was detected in groundwater at 160 micrograms per liter (µg/L) from monitoring well B-2, and at 10 µg/L from monitoring wells B-5 and B-6. Well B-2 is between Building A and the drop hammer building. Subsequent groundwater sampling for hexavalent chromium in 2005 showed no exceedances of the MDE standard (100 µg/L) in filtered or unfiltered samples.

2.2.2 2003 Phase I Environmental Site Assessment and 2004 Historical Review

In February 2003, a Phase I environmental site assessment (ESA) of the MRC was conducted in accordance with the ASTM International (ASTM) standard E 1527 (Earth Tech, 2003). The Phase I ESA sought to identify recognized environmental conditions (RECs) at MRC. A REC is the presence, or likely presence, of any hazardous substances or petroleum products on a property, under conditions that indicate the possibility of an existing release, a past release, or a material threat of a release of those (hazardous) substances into structures on the property or into the ground, groundwater, or surface water of the property. The Phase I ESA investigation reviewed MRC historical records (e.g., facility documents, aerial photographs, and city directories) and federal, state, and local agency databases; interviewed site personnel, and included a site visit. Thirteen (13) RECs associated with the MRC were identified, and further investigation of the facility's historical activities was recommended to identify other potential environmental concerns. In 2004, a more detailed historical review identified 18 additional RECs along the facility perimeter, within the active industrial yard, and within Buildings A, B, and C (Tetra Tech, 2004). The initial 31 RECs identified in 2004 and RECs #32–#42 (identified in subsequent studies) are shown in Figure 2-6.

2.2.3 2005 Site-Wide Groundwater Investigation

The 2005 groundwater investigation advanced soil borings; installed shallow, intermediate, and deep wells; tested aquifer hydraulics; and analyzed groundwater samples to characterize the subsurface geology, hydrogeology, and groundwater quality at the MRC (Tetra Tech, 2006). The investigation objectives were to determine and evaluate environmental baseline conditions at the 31 RECs identified in 2005 (RECs #32–#42 on Figure 2-6 were identified as part of subsequent studies) and at areas within MRC where RECs were not identified. The investigation also sought to characterize risk under current and proposed land use scenarios and determine whether tax

blocks were to be closed with a "No Further Requirements Determination," or if remediation would be warranted under a response action plan.

Data from the facility-wide investigation indicated that shallow groundwater had been affected by the release of chlorinated solvents (primarily TCE) and, to a lesser extent, by the release of petroleum compounds from underground storage tank (USTs). The cVOC releases occurred within Block I, and resulted in two relatively narrow TCE plumes. The risk assessment for groundwater identified these chlorinated solvents and petroleum hydrocarbons as contaminants of concern in groundwater.

2.2.4 2007 Site-Wide Groundwater Investigation

Investigations before 2007 had identified various compounds in site groundwater at concentrations greater than MDE standards, but insufficient data were available to complete a remedial design. These earlier investigations led Tetra Tech to further investigate the surficial water-bearing unit beneath the MRC in 2007 to obtain information required for the remedial design. The remedial design study included membrane-interface probe (MIP)/soil conductivity (SC) and direct-push technologies (DPT) investigations, followed by monitoring well installation and sampling. Groundwater aquifer tests and bench- and pilot-scale studies were also performed. The overall objective of the 2007 groundwater characterization was to fill data gaps at the MRC related to known shallow groundwater plumes, and contaminant-source areas and resultant plumes were delineated. The following tasks were completed during the 2007 groundwater characterization:

- 20 borings were advanced, with soil and groundwater screening via MIP/SC
- 18 DPT soil borings were advanced, soil and groundwater were sampled, and a screening-level analysis for TCE was done using Color-Tec™ field-test kits
- 26 monitoring wells and 15 observation wells were installed to support subsequent pilot testing; four piezometers were installed to support aquifer hydraulics testing
- 80 existing monitoring wells, 26 new monitoring wells, and 15 new observation wells were sampled and monitored

Elevated readings at five of 20 MIP/SC locations indicated VOCs. MIP/SC screening results were used to position 18 confirmatory DPT soil borings. Soil and groundwater samples were

collected for confirmatory chemical analyses. The MIP/SC screening also guided new well placement.

Groundwater samples were collected from 26 new monitoring wells, 80 existing monitoring wells, and 15 newly installed observation wells. Several organic compounds were detected, with concentrations of 17 compounds exceeding Maryland groundwater standards. VOCs with the most frequent exceedances were TCE, 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,1-DCE), and VC. The maximum concentrations of these compounds were 70,000 µg/L (MW74A), 870 µg/L (OW2I), 3,470 µg/L (MW70B), and 211 µg/L (OW2I), respectively. Benzene exceeded its groundwater standard at five locations, but was generally not co-located with the TCE exceedances. Benzene plumes were detected around wells MW23 and MW50.

1,4-Dioxane was detected in groundwater at 15 locations at concentrations in excess of the California Department of Health Services action level of 3 µg/L (Maryland had no standard for 1,4-dioxane at the time of this 2007 study). 1,4-Dioxane detections were widespread in the western portion of the property, with the maximum concentration (120 µg/L) at MW12A. Detected concentrations of 1,4-dioxane were generally co-located with TCE in the western TCE plume. Eight metals were also detected in groundwater at concentrations in excess of their respective standards, as follows: nickel (48 exceedances), beryllium (37 exceedances), vanadium (19 exceedances), zinc (eight exceedances), arsenic (two exceedances), lead (two exceedances), antimony (one exceedance), and chromium (one exceedance).

2.2.5 2008 Site-Wide Groundwater Investigation

Groundwater sampling in 2008 supplemented and further refined the 2007 investigation (Tetra Tech, 2009a). Investigation activities included collecting synoptic groundwater-level measurements and obtaining groundwater samples for chemical analyses; results are summarized below:

- Groundwater samples from 114 monitoring wells were collected in July–August 2008 and analyzed for VOCs, 1,4-dioxane, total and filtered metals, and field water-quality parameters. A round of synoptic groundwater measurements was obtained from these wells on October 30, 2008.
- Groundwater flow in October 2008 was similar to that depicted by previous (December 2005 and January 2008) groundwater level data. Upper surficial-aquifer levels were lower in October than those measured in January, due to the area's low precipitation

and groundwater recharge in late summer and fall. Shallow groundwater flow was found to follow the site topography, flowing radially from the hydraulically upgradient northern portion of the MRC at Eastern Boulevard and immediately south of Buildings A, B, and C to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek. Groundwater in the deep surficial-aquifer flows from Eastern Boulevard to the southeast, toward Dark Head Cove.

- Concentrations of cVOCs exceeded Maryland groundwater standards at two main areas of the facility and at multiple depths. TCE, a common industrial solvent and metal degreaser, was the primary VOC exceeding the MDE groundwater standard. TCE-degradation products, such as dichloroethenes (DCEs) and VC, and the fuel-related VOC benzene, also exceeded groundwater standards at the facility. These data confirm two major TCE and TCE-degradation-product plumes: the eastern TCE plume, which originates south of Building C near former underground storage tanks (UST) adjacent to the water tanks, and the western TCE plume, originating at a former UST site south of Building A. These plumes extend southeast and southwest toward Dark Head Cove and Cow Pen Creek.

- The maximum reported TCE concentration in groundwater (12,000 µg/L) was detected in intermediate surficial-aquifer well MW74B, located west of the water tank in the southeastern portion of the property. The historical maximum TCE concentration (10,000 µg/L) before 2008 had been reported for the northern portion of the eastern TCE plume at MW81B, south of Building C. The TCE-concentration distribution in the eastern plume suggests that the elevated concentrations west of the water tank originate from a source south of former Building D in Tax Block E and west of the water tank. This was supported in 2013 by the uncovering of an underground tank containing TCE and other waste materials during pre-remediation of soil in the area of proposed groundwater-remedy injection wells. Additional contaminated soil delineation and removal of TCE-contaminated soil is in the planning phase.

- Benzene concentrations at two primary source areas exceeded the MDE groundwater standard. However, concentrations declined rapidly to levels below the standard at nearby downgradient wells. October 2008 benzene concentrations in groundwater samples were 40 to 88% less than the concentrations detected during the 2005 investigation. Benzene was not detected in 2008 at several locations where it had been detected at low concentrations in 2005.

- 1,4-Dioxane was detected primarily in groundwater samples collected from the upper and intermediate surficial-aquifer. 1,4-Dioxane was co-located with cVOCs and was detected primarily in the western TCE plume at levels ranging from 2.4 µg/L at MW17A (southwest of Building A) to 120 µg/L at MW12A (near Cow Pen Creek). 1,4-Dioxane was largely absent from the eastern TCE plume, and was only detected at low concentrations in three wells.

- Concentrations of 12 metals exceeded groundwater standards in one or more groundwater samples. Although Maryland does not have a standard for cobalt, detected cobalt concentrations frequently exceeded the United States Environmental Protection Agency (USEPA) risk-based concentration for tap water. Concentrations of iron and manganese

exceeded standards most frequently; maximum concentrations of these two metals exceeded standards by more than two orders of magnitude (i.e., 100 times). Concentrations of beryllium and vanadium exceeded the standard in approximately 20% of samples, with maximum concentrations exceeding groundwater standards by more than an order of magnitude (i.e., 10 times). Concentrations of the remaining metals (i.e., arsenic, cadmium, chromium, copper, lead, mercury, and zinc) exceeded standards in fewer than 10% of groundwater samples. Metals concentrations ranged from one exceedance each for cadmium and mercury to eight exceedances for zinc. Concentrations of arsenic, cadmium, chromium, copper, lead, mercury, and zinc exceeding groundwater standards were co-located with high concentrations of manganese, iron, and nickel.

2.2.6 2008–2009 Block I Phase II Investigation

A Phase II site investigation was conducted in Block I from August 2008 through January 2009 (Tetra Tech, 2009b). This investigation collected groundwater, subsurface soil gas, building sub-slab soil gas, and subsurface soil samples, and chemically analyzed them for the subject constituents. MIP technology was used to assess subsurface contaminants and locate new groundwater monitoring wells. Three well clusters and seven individual (or single-level) wells were installed during this investigation to monitor the shallow and intermediate zones of the surficial aquifer. Two deep wells were installed to monitor the deep zone of the surficial aquifer.

Groundwater samples were collected in November 2008 and January 2009 from the 15 newly installed monitoring wells and analyzed for VOCs, 1,4-dioxane, total and filtered metals, and field water-quality parameters. A round of synoptic groundwater measurements was obtained from these wells on February 4, 2009. Analytical results of groundwater samples from the newly installed monitoring wells confirmed TCE at concentrations ranging from non-detect to a maximum of 1,500 µg/L (detected at MW88A).

TCE concentrations exceeded the MDE groundwater standard (5 µg/L) at four locations: MW74C (6.8 µg/L), MW87B (300 µg/L), MW90B (370 µg/L), and MW88A (1,500 µg/L). The highest TCE concentration detected (1,500 µg/L at MW88A) was approximately 250 feet southeast of the northeast corner of Building C, and may represent a previously unidentified source. TCE was not detected in well MW88B, which is installed in the intermediate surficial-aquifer zone beneath MW88A.

2.2.7 2009 Site-Wide Groundwater Investigation

The 2009 groundwater investigation supplemented and refined data obtained from the 2007 and 2008 investigations (Tetra Tech, 2010a), and included the activities summarized below:

- Groundwater samples were collected from 65 monitoring wells in July–August 2009 and analyzed for VOCs, 1,4-dioxane, total and filtered metals, monitored natural-attenuation assessment (NAA) parameters, and field water-quality parameters. A round of synoptic groundwater measurements was obtained from these wells on July 22, 2009. Long-term surface

- Water and groundwater levels were obtained in July 2009 for several wells, and one surface-water gaging station was installed to collect data for use in a groundwater model in the MRC response action plan.

- Groundwater flow for October 2009 was similar to that depicted in the previous groundwater investigations. Upper surficial-aquifer levels were generally higher in July 2009 than in 2008. Shallow groundwater was found to follow the site topography and flow radially from the hydraulically upgradient northern portion of the MRC at Eastern Boulevard and immediately south of Buildings A, B, and C to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek, while groundwater in the deep surficial aquifer flowed from Eastern Boulevard to the southeast, toward Dark Head Cove.

- Concentrations of cVOCs exceeded Maryland groundwater standards at two main areas of the facility and at multiple depths. TCE-degradation products (e.g., DCEs and VC) and the fuel-related VOC benzene also continued to exceed groundwater standards at the facility. Data confirmed the eastern TCE plume and the western TCE plume that extend southeast and southwest to areas adjacent to Dark Head Cove and Cow Pen Creek.

- The maximum reported TCE concentration (17,000 µg/L) was found in a sample collected from an intermediate surficial-aquifer well: MW74B, located west of the water tanks in the southeastern portion of the property. As noted in Section 2.2.5, an underground tank of waste TCE was discovered in this area during soil pre-remediation activities associated with implementation of the groundwater remedy. Contaminated soil delineation, removal, and groundwater remediation are planned for this area.

- Benzene concentrations at two primary source areas exceeded the MDE groundwater standard, but they declined rapidly to levels below the standard at nearby downgradient wells. Benzene concentrations in all areas (except the two areas of maximum concentrations) in 2009 had generally decreased from those detected in 2008 and 2005. Benzene was not detected at several locations where benzene had been detected at low concentrations in 2005, confirming the 2008 sampling results.

- 1,4-Dioxane was primarily detected in groundwater samples from the upper and intermediate surficial-aquifer, and was co-located in areas where cVOC exceedances had occurred, primarily in the western TCE plume. 1,4-Dioxane levels ranged from 0.89 µg/L (at MW21A, south of Building A) to 136 µg/L (at MW12A, near Cow Pen Creek). 1,4-Dioxane was largely absent from the eastern TCE plume, except for its detection at low concentrations in groundwater samples from two wells.

- Concentrations of eight metals exceeded the groundwater standards in one or more groundwater samples. Concentrations of iron and manganese exceeded standards most frequently, with maximum concentrations exceeding standards by more than two orders of magnitude (i.e., a factor of 100). Concentrations of beryllium and vanadium exceeded their respective standards in nearly 20% of samples, with maximum concentrations exceeding groundwater standards by more than an order of magnitude. Concentrations of the remaining metals (such as cadmium, copper, and zinc) exceeded standards in fewer than two percent of samples.

2.2.8 2010 Deep Groundwater Investigation

In March–April 2010, four deep-soil borings were advanced to depths ranging from 216–316 feet below grade (Tetra Tech, 2010b). Four two-inch inside-diameter monitoring wells were installed to monitor groundwater levels and groundwater quality in the deep confined aquifer beneath the lower surficial aquifer and above the Arundel Formation. Well-bottom completion depths ranged from 189 to 214 feet below grade.

Lithologic data, shown in Figures 2-2 through 2-5, indicate a series of alternating sand and silt aquifers and clay aquitards beneath the surficial aquifer. Clay up to 50 feet thick underlies the surficial aquifer at 15–60 feet below msl at MW93D and at 60–110 feet below msl at MW94D and MW96D. Data from the deepest boring (MW93D, advanced to 316 feet below grade) indicate a lens of continuous clay beginning at 164 feet below msl and ending at approximately 237 feet below msl. Seven feet of sand directly overlies the clay, followed by 11 feet of overlying clay and sand layers (clay thickness totaling eight feet) from 146 to 157 feet below msl. Beneath the continuous clay layer (at a depth of 164 to 237 feet below msl) is a 14-foot layer of silty and clayey fine sand, followed by another 15 feet of clay from 251 to 266 feet below msl.

Groundwater samples were collected from the newly installed wells on June 10–11, 2010 and analyzed for VOCs, SVOCs, 1,4-dioxane, and unfiltered and filtered metals. Permeability tests were conducted on Arundel Formation clay at elevations ranging from 170 to 213 feet below msl; data indicated low vertical permeabilities (2.1×10^{-08} to 8.2×10^{-08} centimeters per second). Groundwater flow in the deep aquifer (which is hydraulically confined

above and below by thick clay layers) is southeasterly from well MW93D, in the northern boundary of the MRC, toward well MW96D and Dark Head Cove.

Chemicals of concern (cVOCs, VOC-degradation products, and the SVOC 1,4-dioxane) that had been detected in surficial-aquifer groundwater were not detected in the deep-well groundwater samples. VOCs and SVOCs detected in the deep-well samples are common laboratory contaminants, or constituents of potable water used during borehole drilling, and were less than Maryland groundwater standards.

2.2.9 2010 Site-Wide Groundwater Investigation

The May–June 2010 groundwater sampling supplemented and further refined the 2009 investigation results (Tetra Tech, 2012b). Investigation activities are summarized below:

- Groundwater samples were collected from 126 monitoring wells and analyzed for VOCs, 1,4-dioxane, total metals, NAA parameters, SVOCs, and field water-quality parameters. A round of synoptic groundwater measurements was obtained from these wells on June 28–30, 2010.

- Interpreted groundwater flow for June 2010 was similar to that depicted in previous groundwater level data. June 2010 surficial aquifer groundwater elevations were generally lower than those measured in 2009. Shallow groundwater followed site topography and flowed radially from the hydraulically upgradient northern portion of the MRC (at Eastern Boulevard and immediately south of Buildings A, B, and C) to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek. Groundwater flow in the deep surficial aquifer and deep confined aquifer was southeasterly from Eastern Boulevard toward Dark Head Cove.

- Concentrations of cVOCs exceeded Maryland groundwater standards at three main areas of the facility, and at multiple depths. TCE-degradation products (such as DCEs and VC) also exceeded Maryland groundwater standards, as did the fuel-related VOC benzene. These data confirm three TCE and TCE-degradation-product plumes: the eastern TCE plume, the western TCE plume, and a small TCE plume west of Building A. The eastern and western TCE plumes extend southeast and southwest to areas adjacent to Dark Head Cove and Cow Pen Creek.

- Concentrations of TCE at most source-area wells had increased or remained steady over the monitoring period. TCE concentrations at MW21B (the northern source area of the western TCE plume) and at MW37A (near the southern source area of the eastern TCE plume) had decreased since 2005.

- TCE-degradation products at 14 wells where groundwater samples had also been analyzed for NAA parameters indicated that limited anaerobic reductive-dechlorination was occurring in groundwater. VC, ethene, methane, elevated alkalinity, and chloride

concentrations detected at several well locations indicated that complete mineralization may be occurring in the hydraulically downgradient fringes of the plumes. However, relatively constant TCE concentrations over the monitoring period, low or absent concentrations of lower-chain degradation products, and the poor subsurface conditions indicated by NAA parameters (e.g., oxygen-reduction potential [ORP], sulfate, chloride, etc.) suggest that slow or incomplete reductive mineralization of lower order VOCs may have been occurring in the VOC source areas.

The maximum reported TCE concentration (19,000 µg/L) detected during the 2010 sampling round was in a sample collected from intermediate surficial-aquifer well (MW74B), located west of the water tanks in the southeastern portion of the property. The maximum concentrations of TCE reported at MW74B (19,000 µg/L), MW72B (4,200 µg/L), and MW60B (3,900 µg/L) were collected from the intermediate portion of the surficial aquifer. Source(s) of this contamination may be TCE released from the waste TCE tank discovered in 2013 during groundwater remedy pre-remediation, or may have originated from the south end of the Building C Basement (near MW60B).

- Benzene concentrations exceeded the MDE groundwater standard (5 µg/L) at three areas. However, concentrations declined rapidly to levels less than the standard at nearby downgradient wells. Benzene concentrations detected in 2010 generally decreased as compared to those measured in 2009, 2008, and 2005. Benzene was not detected at several locations where it had been detected at low concentrations in 2005, confirming the intervening sampling results.

- 1,4-Dioxane was primarily detected in groundwater samples from the upper and intermediate surficial-aquifer. 1,4-Dioxane was co-located in areas with the highest concentrations of cVOCs and occurred primarily in the western TCE plume, at levels ranging from 0.96 µg/L at MW10A (near Cow Pen Creek) to 360 µg/L at MW14B (western TCE plume source area). 1,4-Dioxane was largely absent from the eastern TCE plume, except for its detection at MW44A, where a low concentration (4.6 µg/L) was detected; this concentration was slightly above the drinking-water advisory level. 1,4-Dioxane does not appear to have been used or widely released to groundwater in the eastern portion of the MRC.

- Concentrations of 14 metals exceeded MDE groundwater standards in one or more groundwater samples. Concentrations of iron and manganese exceeded standards most frequently, with maximum concentrations exceeding standards by more than a factor of 100. Concentrations of beryllium and vanadium exceeded their standards in nearly 20% of samples, with maximum concentrations exceeding screening levels by more than an order of magnitude (i.e., 10 times). Concentrations of the remaining metals (such as cadmium, copper, lead, arsenic, antimony, barium, chromium, and zinc) exceeded screening levels in no more than 3% of samples.

2.2.10 2010 Supplemental Block I Characterization

The Block I supplemental investigation (Tetra Tech, 2011) conducted in fall/winter 2010 supplemented historical groundwater, soil, and soil-gas data obtained during the 2009 Phase II investigation (Tetra Tech, 2009b); a summary of this investigation follows:

- A round of synoptic groundwater levels was collected from MRC wells, and 25 new monitoring wells (consisting of nine shallow, 14 intermediate, and two intermediate-to-deep wells) were installed, followed by the collection of groundwater samples, which were analyzed for VOCs, SVOCs, 1,4-dioxane, and metals. Twenty-eight borings were advanced via MIP for soil, groundwater, and subsurface screening for halogenated VOCs and petroleum hydrocarbons.

- The January 2011 groundwater flow for the surficial aquifer was similar to that interpreted in previous groundwater level data: shallow groundwater flow followed the site topography, flowing radially from the hydraulically upgradient northern portion of the MRC at Eastern Boulevard and immediately south of Buildings A, B, and C. January 2011 upper- and intermediate-well groundwater elevations were lower than those measured in 2010.

- TCE concentrations detected in newly installed wells ranged from 0.65 µg/L at MW93A (east of Building C) to a maximum of 3,700 µg/L at MW96A (approximately 150 feet southwest of Building A, near the former Marform pit). Nine TCE concentrations exceeded the MDE groundwater standard (5 µg/L): 53 µg/L (MW53B), 3,700 µg/L (MW96A), 11 µg/L (MW96B), 79 µg/L (MW98A), 1,300 µg/L (MW98B), 14 µg/L (MW100A), 87 µg/L (MW100B), 81 µg/L (MW102B), and 38 µg/L (MW105A). Detected concentrations of TCE in the newly installed monitoring wells suggest an additional source of TCE in groundwater near MW96A-B, west of Building A.

- Benzene concentrations in newly installed wells ranged from 18 µg/L at MW98B (northern Tilley Chemical property) to a maximum of 340 µg/L at MW96B (west of Building A, near the Marform pit). Three newly installed wells had concentrations of benzene exceeding the standard: MW53B (60 µg/L), MW96B (340 µg/L), and MW98B (18 µg/L).

- 1,4-Dioxane was detected in MW96A (1.2 µg/L), MW53B (1.7 µg/L), MW22B (1.6 µg/L), MW98A (10 µg/L), and MW102A (0.89 µg/L).

- Eleven metals had concentrations that exceeded MDE groundwater standards in one or more groundwater samples, including: arsenic (two exceedances), beryllium (seven exceedances), cadmium (one exceedance), chromium (two exceedances), iron (23 exceedances), lead (two exceedances) manganese (25 exceedances), nickel (10 exceedances), thallium (one exceedance), vanadium (seven exceedances), and zinc (one exceedance).

2.2.11 2011 Groundwater Monitoring

The findings of the 2011 groundwater investigation (Tetra Tech, 2012c) are summarized below:

- Groundwater samples were collected from 152 monitoring wells in March–May 2011 and analyzed for VOCs, 1,4-dioxane, metals, hexavalent chromium, perchlorate, NAA parameters, polychlorinated biphenyls (PCBs), and field water-quality parameters. A round of synoptic groundwater measurements was obtained from these wells on March 23–24, 2011.

- March 2011 groundwater flow was similar to that depicted in previous groundwater level data: shallow groundwater followed site topography and flowed radially from the hydraulically upgradient northern portion of the site near Eastern Boulevard and immediately south of Buildings A, B, and C, to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek. Groundwater in the deep surficial aquifer and deep confined aquifer flowed southeasterly and southerly, respectively, from Eastern Boulevard toward Dark Head Cove. Surficial aquifer groundwater elevations were generally higher in March 2011 than those measured in January 2011 and June 2010.

- Concentrations of cVOCs exceeded Maryland groundwater standards at three main areas of the facility and at multiple depths. TCE was the primary VOC exceeding the Maryland groundwater standard. TCE-degradation products, such as DCEs and VC, also exceeded Maryland groundwater standards at the facility, as did the fuel-related VOC benzene. These data confirm the three TCE and TCE-degradation product plumes detected in previous investigations: the eastern TCE plume (which originates south of Building C near a former UST site adjacent to existing water tanks); the western TCE plume (originating at a former UST tank site south of Building A); and a smaller TCE plume west of Building A. The eastern and western TCE plumes extend southeast and southwest to areas adjacent to Dark Head Cove and Cow Pen Creek. TCE was also detected at several isolated locations in the western portion of the facility, south of the eastern TCE plume, and north of the eastern TCE plume.

- Concentrations of TCE at most source-area wells increased or remained steady over the monitoring period. TCE concentrations at MW21B (at the northern source area of the western TCE plume), MW27B (in the center of the eastern TCE plume), and MW37A (near the southern source area of the eastern TCE plume) decreased from 2005 through 2010, but then increased in 2011. TCE concentrations continued to increase at MW60B and MW74B, two wells near possible source areas in the eastern TCE plume.

- TCE-degradation products were detected at 16 wells where groundwater samples were analyzed for NAA parameters, indicating limited anaerobic reductive-dechlorination. Concentrations of VC, ethene, methane, chloride, and elevated alkalinity at several well locations indicate that complete mineralization may be occurring in the hydraulically downgradient fringes of the plumes. However, relatively constant or increasing TCE concentrations over the monitoring period, low or absent concentrations of lower-chain degradation products, and the poor subsurface conditions indicated by the NAA parameters suggest that slow or incomplete reductive mineralization of lower-order VOCs may be occurring in the VOC source areas.

- The maximum TCE concentration (23,000 µg/L) reported for this round of sampling had decreased from the maximum concentration (70,000 µg/L) detected in 2007 in the sample from intermediate surficial-aquifer well MW74B, west of the water tanks in the southeastern portion of the MRC. The maximum concentrations of TCE reported for wells MW74B (23,000 µg/L), MW72B (4,000 µg/L), and MW60B (5,500 µg/L) were detected in samples collected from the intermediate portion of the surficial aquifer. The source(s) of this plume may have come from the release of TCE from a waste storage tank discovered in 2013 during soil pre-remediation (associated with implementation of the groundwater remedy) near well MW74B, or may have originated from the south end of the C Basement (near MW60B).

- Benzene concentrations exceeded the state groundwater standard at three locations. However, concentrations declined rapidly to levels below the standard at nearby downgradient wells. In general, benzene concentrations detected in 2011 were slightly increased from those measured in 2010. Benzene was not detected at several locations where it had been detected at low concentrations in 2005, confirming previous sampling results.

- The SVOC 1,4-dioxane was primarily detected in groundwater samples from the upper and intermediate surficial-aquifer. 1,4-Dioxane continued to be co-located in areas with high concentrations of cVOCs, and occurred primarily in the western TCE plume, with levels ranging from 0.5 µg/L (at well MW72A in the southeast corner of D-lot) to 160 µg/L (at MW12A in the western TCE plume, downgradient, near Cow Pen Creek) and MW98B (northern Tilley Chemical property). 1,4-Dioxane was largely absent from the eastern TCE plume, except for its detection at well MW44A at a low concentration (2.7 µg/L), below the USEPA drinking-water advisory level. 1,4-Dioxane does not appear to have been used or widely released to groundwater in the eastern portion of the MRC.

- Groundwater samples from six wells (MW43A, MW44A, MW62A, MW62C, MW103A, and MW103B) were analyzed for PCBs where elevated levels of PCBs had previously been detected in soil. PCBs were detected in only one of six samples (MW43A), at a concentration (0.24 µg/L) less than the groundwater standard (0.5 µg/L).

- Concentrations of 12 metals exceeded Maryland groundwater standards in one or more groundwater samples. Concentrations of iron and manganese exceeded standards most frequently, with maximum concentrations exceeding standards by more than a factor of 100 (i.e., two orders of magnitude). Concentrations of vanadium and beryllium exceeded the standard in 13% and 21% of samples, respectively, with maximum concentrations exceeding groundwater standards by more than an order of magnitude (i.e., more than 10 times). Nickel concentrations exceeded the standard in 34% of samples, with maximum concentrations exceeding groundwater standards by more than a factor of 100. Concentrations of the remaining metals (such as cadmium, copper, lead, arsenic, barium, chromium, and zinc) exceeded standards in no more than 1.7% of samples.

- Hexavalent chromium was detected in 13 of 62 (21%) groundwater samples analyzed for hexavalent chromium. Detected concentrations ranged from 0.012 µg/L (at MW93A, east of Building C) to 35.7 µg/L (at well EXT-MW06, in the southwestern portion of the

MRC near the Tilley Chemical property). All detected hexavalent chromium concentrations were less than the groundwater standard (100 µg/L).

- Perchlorate was detected in four of 62 (6%) groundwater samples analyzed for perchlorate. Detected concentrations ranged from 1.8 µg/L (at MW38A, near Dark Head Cove) to 15.7 µg/L (at well MW53A, west of Building A). Three perchlorate concentrations exceeded the groundwater standard (2.6 µg/L): 15.7 µg/L at MW53A, 4.4 µg/L at MW96B (west of Building A), and 2.9 µg/L at MW01A (near Eastern Boulevard).

2.2.12 2012 Groundwater Monitoring

The findings of the 2012 investigation (Tetra Tech, 2012d) are summarized below:

- Groundwater samples were collected from 129 monitoring wells in March–April of 2012. Samples were analyzed for VOCs, 1,4-dioxane, metals, hexavalent chromium, perchlorate, NAA parameters, PCBs, and field water-quality parameters. A round of synoptic groundwater measurements was obtained from the wells on March 7–8, 2012.

- Groundwater flow in March 2012 was similar to that depicted by previous groundwater level data. Surficial aquifer groundwater elevations in 2012 were generally lower than those measured in 2011. Shallow groundwater flow follows site topography, flowing radially from the hydraulically upgradient northern portion of the MRC at Eastern Boulevard and immediately south of Buildings A, B, and C, to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek. Groundwater in the deep surficial aquifer flows southeasterly from Eastern Boulevard toward Dark Head Cove.

- Concentrations of cVOCs exceeded Maryland groundwater standards at three main areas of the facility and at multiple depths. TCE, *cis*-1,2-DCE and VC exceeded Maryland groundwater standards, as did the fuel-related VOC benzene. These data confirm three TCE and TCE-degradation-product plumes: the eastern TCE plume (originating south of Building C near a former UST adjacent to the water tanks); the western TCE plume (originating at a former UST site south of Building A); and a smaller TCE plume west of Building A. TCE was also confirmed at several isolated locations in the western portion of the facility, south of the eastern TCE plume, and north of the eastern TCE plume.

- Concentrations of TCE at most source-area wells had increased or had remained steady over the monitoring period. TCE concentrations at MW21B (at the northern source area of the western TCE plume) and well MW37A (near the southern source area of the eastern TCE plume) generally decreased from 2005–2012. TCE concentrations had continued to increase at MW74B, a source-area well in the eastern TCE plume. TCE at MW60B, a source-area well in the northern portion of the eastern TCE plume, had increased from 2007–2011, but then subsequently decreased in 2012 to a concentration comparable to the 2010 concentration.

- TCE-degradation products were detected at 16 wells where groundwater samples were analyzed for NAA parameters. Results indicate that limited anaerobic

reductive-dechlorination is occurring. Concentrations of VC, ethene, methane, chloride, and elevated alkalinity at several well locations indicate that complete mineralization may be occurring in the hydraulically downgradient fringes of the plumes. However, relatively constant or increasing TCE concentrations over the monitoring period, low or absent concentrations of lower-chain degradation products, and the poor subsurface conditions indicated by the NAA parameters suggest that slow or incomplete reductive mineralization of lower-order VOCs may be occurring in the VOC source-areas.

- The maximum reported TCE concentration (30,000 µg/L) in 2012 had increased compared to the maximum concentration detected in 2007 in the intermediate surficial-aquifer well MW74B (13,000 µg/L), located west of the water tanks in the southeastern portion of the property. The 2012 maximum TCE concentrations were reported in samples from wells MW74B (30,000 µg/L), MW72B (4,300 µg/L), and MW60B (3,500 µg/L); all are screened in the intermediate portion of the surficial aquifer. The source(s) of this plume may be from a release from the tank of waste TCE discovered in 2013 during soil pre-remediation activities associated with implementation of the groundwater remedy, or may originate from the south end of the Building C Basement (near MW60B).

- Benzene concentrations at three areas west of Building A (within the western TCE plume and near the vertical-assembly building) exceeded the state groundwater standard. However, concentrations declined rapidly to levels below the standard at nearby downgradient wells. Benzene concentrations detected in 2012 generally increased from those measured in 2011, but decreases were observed at the four wells containing maximum (or near maximum) benzene concentrations. Benzene was not detected at several locations where it had been detected at low concentrations in 2005, confirming previous sampling results.

- The SVOC 1,4-dioxane was primarily detected in groundwater samples from the upper and intermediate surficial-aquifer. 1,4-Dioxane was detected primarily in the western TCE plume, with levels ranging from 0.53 µg/L (at MW22A, southeast of Building A) to 440 µg/L (at MW14B in Tax Block G, west of the Tilley Chemical property). 1,4-Dioxane is largely absent from the eastern TCE plume, except for its detection at well MW44A (3.9 µg/L) at a concentration slightly exceeding its screening level (the California action level of 3.0 µg/L). (Maryland does not have a groundwater standard for 1,4-dioxane.) 1,4-Dioxane does not appear to have been widely used or released to groundwater in the eastern portion of the MRC.

- Groundwater samples from six wells (MW43A, MW44A, MW62A, MW62C, MW103A, and MW103B) were analyzed for PCBs in Tax Block E at D-Lot, where elevated levels of PCBs had previously been detected in soil, but PCBs were not detected. PCBs had been detected previously (in 2011) at well MW43A (0.24 µg/L), but at a concentration less than the groundwater standard (0.5 µg/L).

- Concentrations of 12 metals exceeded Maryland groundwater standards in one or more groundwater samples. Concentrations of manganese, iron, and nickel exceeded standards most frequently, with the maximum concentrations exceeding standards by more than a factor of 100. Concentrations of beryllium and vanadium exceeded the standard in 23%

and 11% of samples, respectively, with maximum concentrations exceeding groundwater standards by more than an order of magnitude (i.e., more than 10 times). Concentrations of the remaining metals (cadmium, copper, lead, arsenic, barium, chromium, and zinc) exceed standards in no more than 3% of samples.

- Hexavalent chromium was detected in two of 27 (7%) groundwater samples analyzed for hexavalent chromium. Hexavalent chromium was detected at MW80A (0.918 µg/L) and EXT-MW06 (39 µg/L). Both wells are in the southwestern portion of the MRC and downgradient of REC #9 (former 2,000-gallon waste oil UST) and the hazardous waste storage building. All hexavalent chromium concentrations are less than the MDE groundwater standard of 100 µg/L. Hexavalent chromium was not detected in newly installed wells MW109A/B, MW110A/B, MW111A/B, and MW112A. Multiple years of groundwater sampling have not shown evidence that dissolved-phase hexavalent chromium in MRC groundwater is a concern.

- Perchlorate was detected in three of seven (43%) groundwater samples analyzed for perchlorate. Detected concentrations of perchlorate ranged from 0.74 µg/L (MW110A) to 3.4 µg/L (MW110B), the latter of which exceeds the Maryland groundwater standard of 2.6 µg/L. Both of these wells are in parking lot 2 west of Building A. Perchlorate was also detected at a low concentration (0.81 µg/L) at well MW109B, which is also west of and adjacent to Building A. Perchlorate was not detected in newly installed wells MW109A, MW111A/B, and MW112A.

Town of Middle River

AMTRAK RAILROAD

EASTERN BOULEVARD

MARTIN BLVD.

BLOCK 'B'

ATHLETIC FIELD

PARKING LOT NO. 4

EXXON GAS STATION

CHESAPEAKE PLAZA

POST OFFICE

BLOCK 'A'

BUILDING "E"

PARKING LOT NO. 5

BLOCK 'A'

PARKING LOT NO. 1

BUILDING "M"

BUILDING "P"

GATE "A"

BLOCK 'I'

BUILDING "C"

BUILDING "B"

BUILDING "L"

PARKING LOT NO. 2

MAINTENANCE OFFICE AND SHOP

BUILDING "A"

BLOCK 'H'

FIRECOAT BUILDING

DROP HAMMER BUILDING ACTIVE FIRING RANGE

FOUR #2 FUEL OIL USTs ABANDONED IN-PLACE

MAINTENANCE GARAGE

POWER HOUSE

DRUM STORAGE FACILITY

FLAME CUT

DIE STORAGE

CHESAPEAKE PARK PLAZA

PARKING LOT NO. 3

HAZARDOUS WASTE STORAGE BUILDING

BLOCK 'G'

CONSERVATION BUILDING

TILLEY CHEMICAL COMPANY

BLOCK 'E'

FORMER BUILDING "D"

FORMER 500-GAL. UST

500,000-GAL. WATER TANK

TRANSFER SHED

FIRE PUMP BUILDING WITH 275-GAL DIESEL FUEL AST

FORMER 500,000-GAL. DIESEL FUEL AST

ANNEX BUILDING

ENG. DEV. LAB BLDG.

WILSON POINT ROAD

Martin State Airport

PROGRAM BUILDING

JOHNSON AND TOWERS

VERTICAL ASSEMBLY BUILDING

DARK HEAD COVE ROAD

PARKING LOT NO. 6

BLOCK 'D'

DARK HEAD COVE

WATERFRONT LOT

CHESAPEAKE PARK PLAZA

FORMER SEWAGE TREATMENT PLANT

NORTH AMERICAN ELECTRIC

FORMER AERO PYHSICS LAB, WIND TUNNEL TEST BUILDING

FORMER HYDRAULIC AND FIELD TEST BUILDING

COW PEN CREEK

BLOCK 'F'

SEVEN 1,000-GAL. AVIATION FUEL USTs ABANDONED IN-PLACE

FORMER TRAINING SCHOOL

FORMER RAMP STORAGE BUILDING

FORMER BOAT HOUSE

FIGURE 2-1

MIDDLE RIVER COMPLEX
SITE LAYOUT AND TAX BLOCKS

LEGEND

- MIDDLE RIVER COMPLEX TAX BLOCK BOUNDARY
- STRUCTURE OR FORMER STRUCTURE
- RAILROAD TRACKS

Lockheed Martin Middle River Complex
Middle River, Maryland

0 150 300 600 Feet

N

DATE MODIFIED: 7/26/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\Tax Blocks_26July13.mxd)
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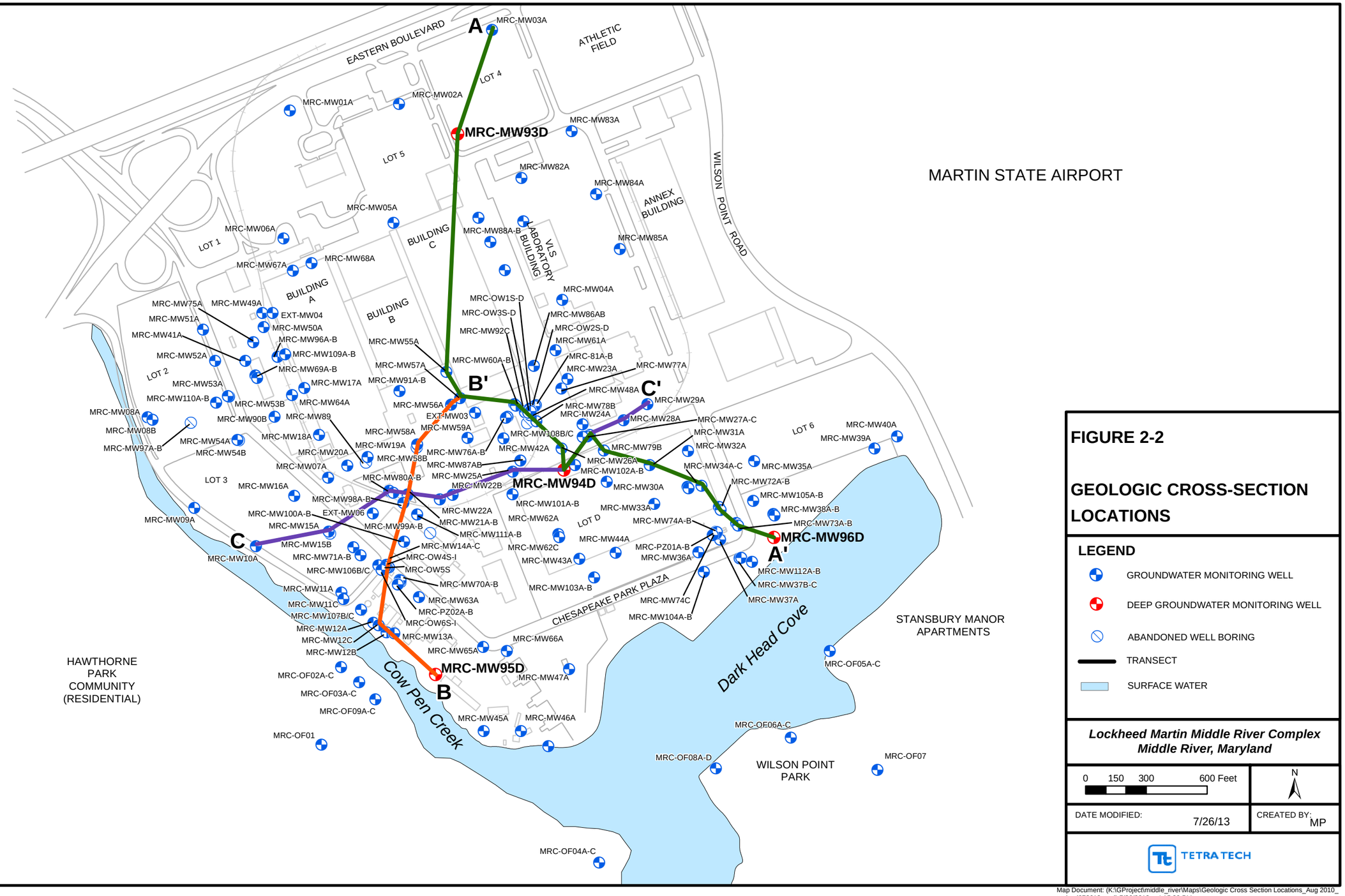

FIGURE 2-2

GEOLOGIC CROSS-SECTION LOCATIONS

LEGEND

- GROUNDWATER MONITORING WELL
- DEEP GROUNDWATER MONITORING WELL
- ABANDONED WELL BORING
- TRANSECT
- SURFACE WATER

Lockheed Martin Middle River Complex
Middle River, Maryland

0 150 300 600 Feet

N

DATE MODIFIED: 7/26/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\Geologic Cross Section Locations_Aug 2010_revised072613.mxd) 7/26/2013 -- 4:15:39 PM

P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\CROSS_SECTION_AA_LITHOLOGY.MXD 9/3/10 KM

North

Southeast

A

A'

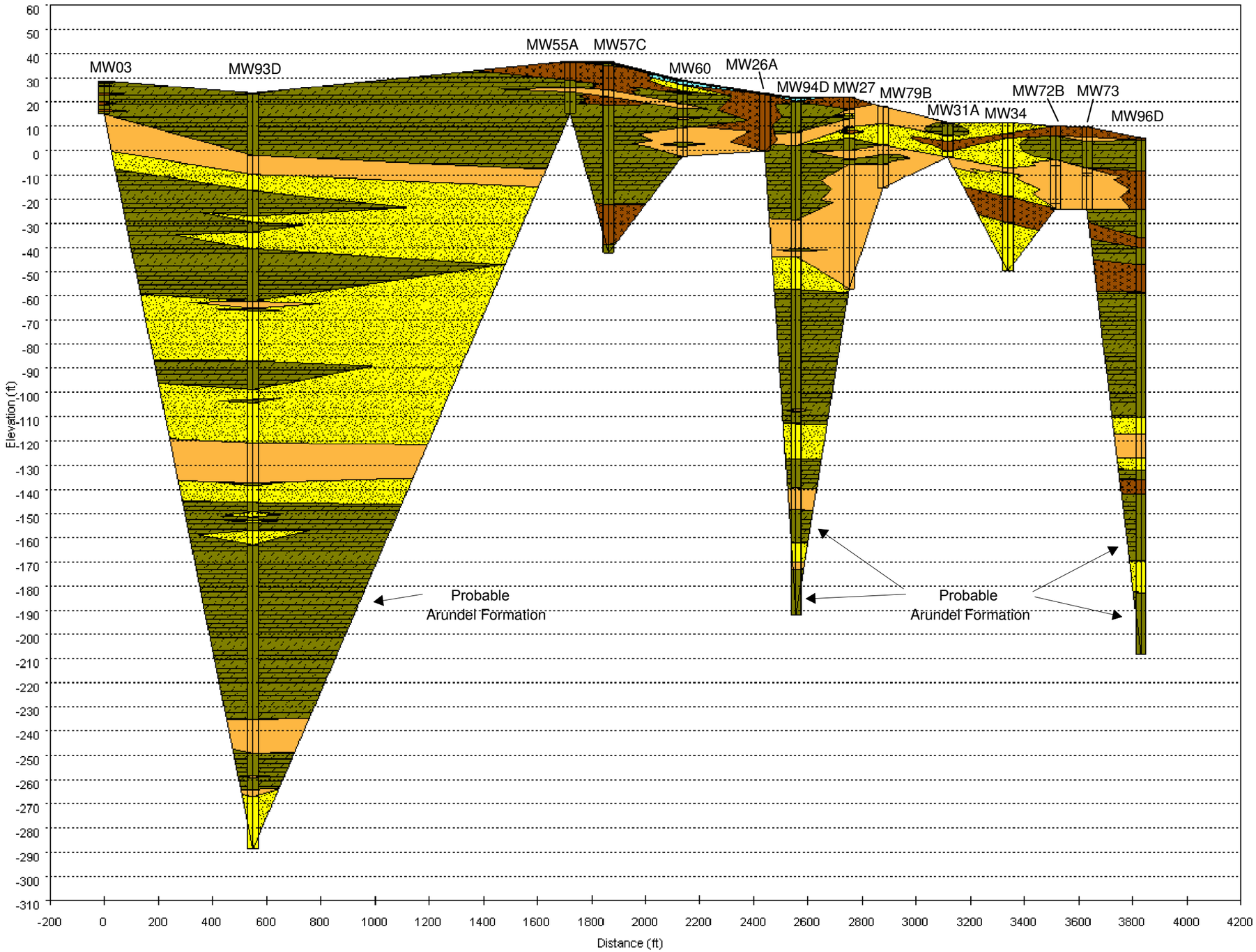

FIGURE 2-3

GEOLOGIC CROSS-SECTION A-A'

LEGEND

Materials
- GRAVEL
- SAND
- SILTY SAND & SANDY SILTY
- SILT & CLAYEY SILT
- CLAY & SILTY CLAY
- PEAT
- CONCRETE&ASPHALT

Lockheed Martin Middle River Complex
Middle River, Maryland

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9/7/10	K. MOORE

TETRA TECH

P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\CROSS_SECTION_BB_LITHOLOGY.MXD 9/2/10 KM

Southwest

North

B

B'



FIGURE 2-4

GEOLOGIC CROSS-SECTION B-B'

LEGEND

Materials
- GRAVEL
- SAND
- SILTY SAND & SANDY SILTY
- SILT & CLAYEY SILT
- CLAY & SILTY CLAY
- PEAT
- CONCRETE&ASPHALT

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
9/7/10	K. MOORE

TETRA TECH

P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\CROSS_SECTION_CC_LITHOLOGY.MXD 9/3/10 KM

West
C

East
C'

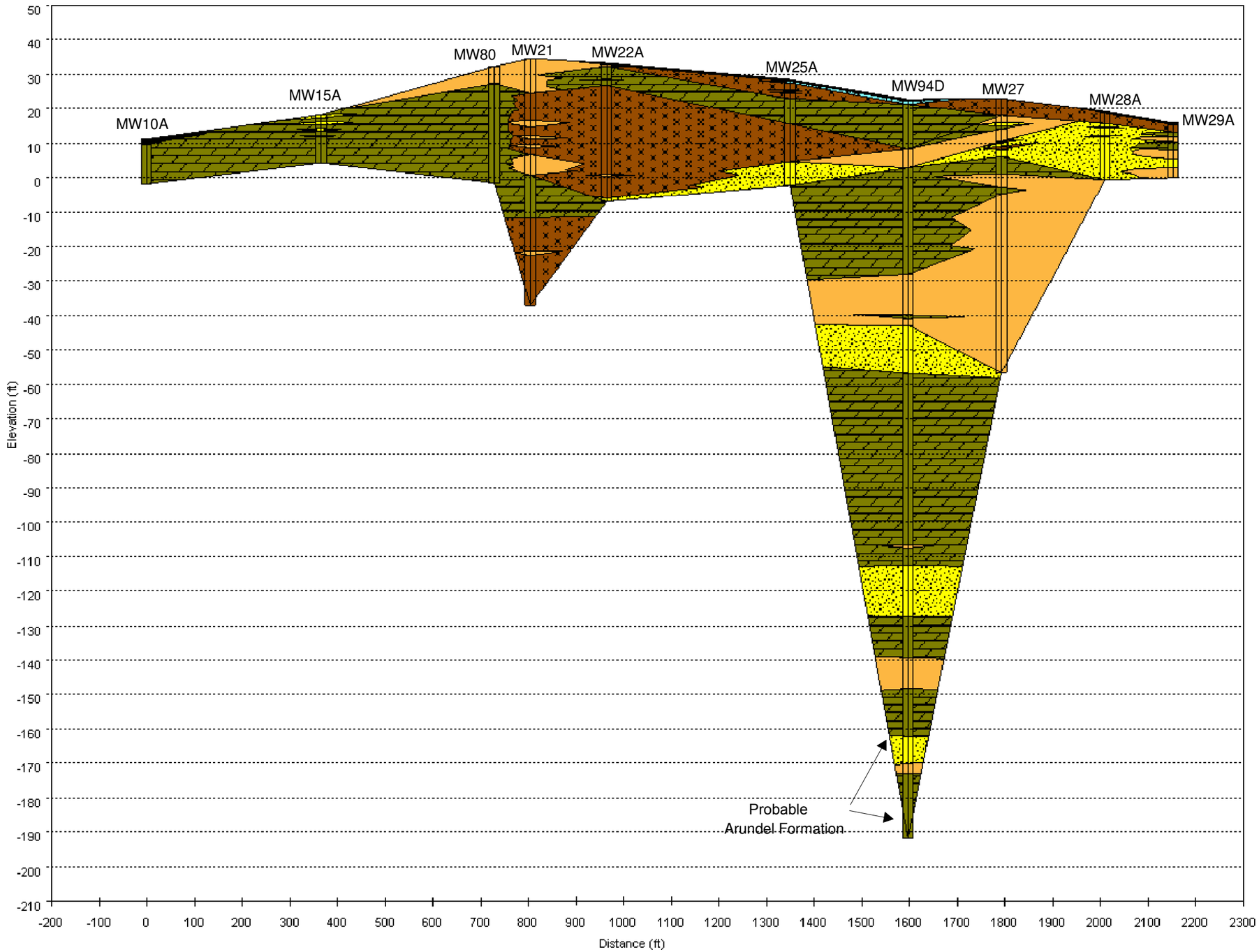


FIGURE 2-5

GEOLOGIC CROSS-SECTION C-C'

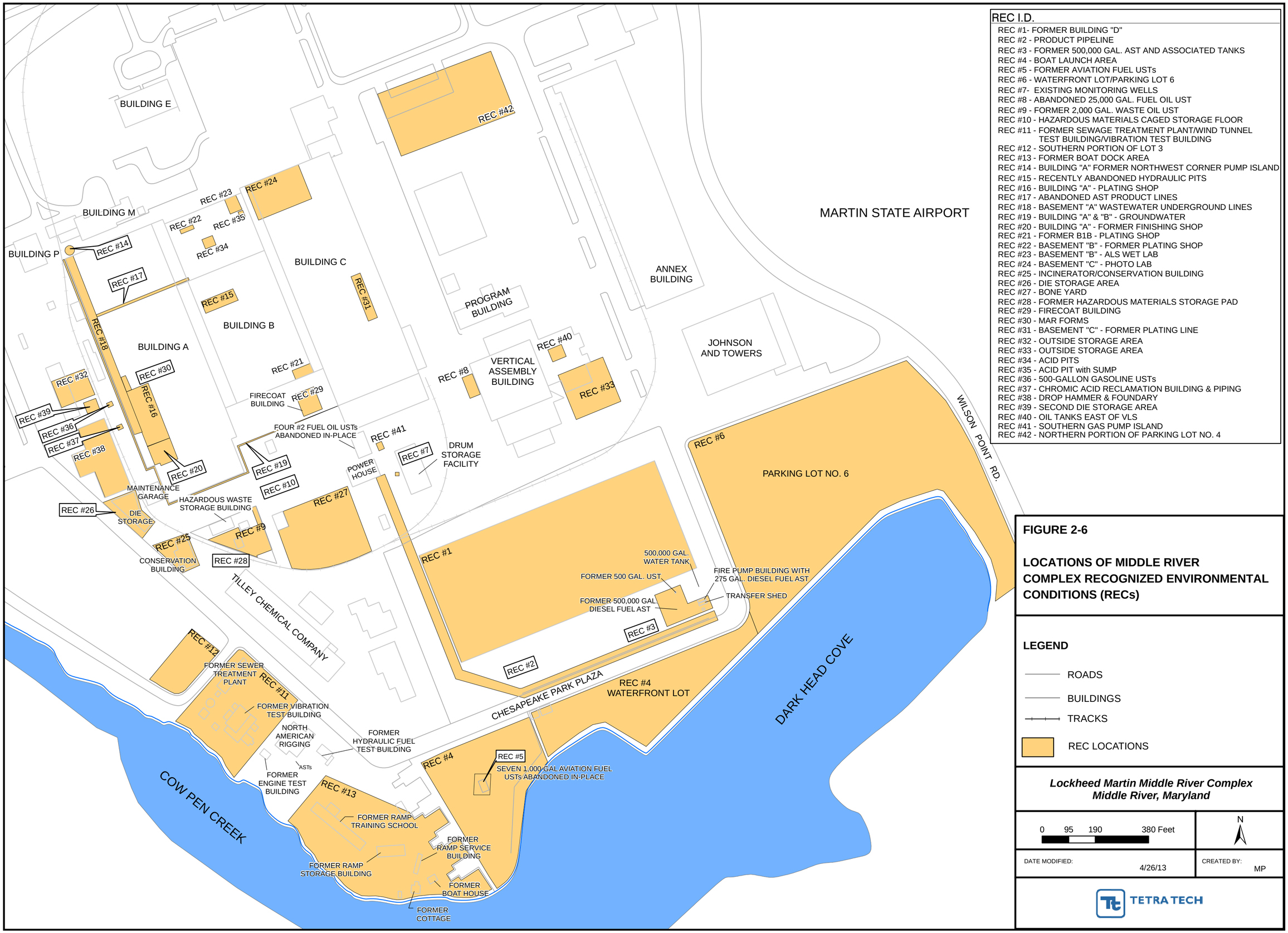
LEGEND

Materials
- GRAVEL
- SAND
- SILTY SAND & SANDY SILTY
- SILT & CLAYEY SILT
- CLAY & SILTY CLAY
- PEAT
- CONCRETE&ASPHALT

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
9/7/10	K. MOORE

TETRA TECH



REC I.D.

- REC #1- FORMER BUILDING "D"
- REC #2 - PRODUCT PIPELINE
- REC #3 - FORMER 500,000 GAL. AST AND ASSOCIATED TANKS
- REC #4 - BOAT LAUNCH AREA
- REC #5 - FORMER AVIATION FUEL USTs
- REC #6 - WATERFRONT LOT/PARKING LOT 6
- REC #7- EXISTING MONITORING WELLS
- REC #8 - ABANDONED 25,000 GAL. FUEL OIL UST
- REC #9 - FORMER 2,000 GAL. WASTE OIL UST
- REC #10 - HAZARDOUS MATERIALS CAGED STORAGE FLOOR
- REC #11 - FORMER SEWAGE TREATMENT PLANT/WIND TUNNEL TEST BUILDING/VIBRATION TEST BUILDING
- REC #12 - SOUTHERN PORTION OF LOT 3
- REC #13 - FORMER BOAT DOCK AREA
- REC #14 - BUILDING "A" FORMER NORTHWEST CORNER PUMP ISLAND
- REC #15 - RECENTLY ABANDONED HYDRAULIC PITS
- REC #16 - BUILDING "A" - PLATING SHOP
- REC #17 - ABANDONED AST PRODUCT LINES
- REC #18 - BASEMENT "A" WASTEWATER UNDERGROUND LINES
- REC #19 - BUILDING "A" & "B" - GROUNDWATER
- REC #20 - BUILDING "A" - FORMER FINISHING SHOP
- REC #21 - FORMER B1B - PLATING SHOP
- REC #22 - BASEMENT "B" - FORMER PLATING SHOP
- REC #23 - BASEMENT "B" - ALS WET LAB
- REC #24 - BASEMENT "C" - PHOTO LAB
- REC #25 - INCINERATOR/CONSERVATION BUILDING
- REC #26 - DIE STORAGE AREA
- REC #27 - BONE YARD
- REC #28 - FORMER HAZARDOUS MATERIALS STORAGE PAD
- REC #29 - FIRECOAT BUILDING
- REC #30 - MAR FORMS
- REC #31 - BASEMENT "C" - FORMER PLATING LINE
- REC #32 - OUTSIDE STORAGE AREA
- REC #33 - OUTSIDE STORAGE AREA
- REC #34 - ACID PITS
- REC #35 - ACID PIT with SUMP
- REC #36 - 500-GALLON GASOLINE USTs
- REC #37 - CHROMIC ACID RECLAMATION BUILDING & PIPING
- REC #38 - DROP HAMMER & FOUNDARY
- REC #39 - SECOND DIE STORAGE AREA
- REC #40 - OIL TANKS EAST OF VLS
- REC #41 - SOUTHERN GAS PUMP ISLAND
- REC #42 - NORTHERN PORTION OF PARKING LOT NO. 4

FIGURE 2-6

LOCATIONS OF MIDDLE RIVER COMPLEX RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs)

LEGEND

- ROADS
- BUILDINGS
- TRACKS
- REC LOCATIONS

Lockheed Martin Middle River Complex
Middle River, Maryland

0 95 190 380 Feet

N

DATE MODIFIED: 4/26/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\MRC REC locations 042613.mxd)
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Section 3
Investigational Approach

This section summarizes the procedures used during the March–May 2013 round of groundwater sampling and collection of synoptic groundwater-level measurements. The investigation's overall objective was to provide a current round of groundwater levels for selected wells and to collect groundwater samples from these wells, to further delineate the nature and extent of groundwater contamination, evaluate time-series trends of on-site groundwater plumes, and evaluate the natural attenuation of chemicals of concern in groundwater at the Middle River Complex (MRC).

3.1 SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS

A synoptic round of groundwater level measurements was conducted on March 12, 2013. Static water levels were measured using a graduated electronic-sounding water level meter. The static water level was determined by lowering the meter's probe into the well until the liquid level-indicator emitted an audible tone, indicating the air/water interface. The water level was read from the probe cable and recorded to the nearest 0.01 foot as the depth to water, with respect to the top of the plastic well casing. Water levels and the time of measurement were recorded for all monitoring wells. Groundwater level measurements are in Appendix A.

3.2 GROUNDWATER SAMPLING

Groundwater samples were collected from 137 on-site and 21 off-site groundwater monitoring wells from March 15–May 9, 2013. Nested wells OF09A-C could not be accessed and sampled because a private vehicle was parked over the casing. Chemical analysis of groundwater samples varied by well and depended on the data needed for that particular area. Most samples were analyzed for volatile organic compounds (VOCs) and total (i.e., unfiltered) metals. Less frequent chemical analyses included 1,4-dioxane (a semivolatile organic compound [SVOC]), perchlorate (a component of propellants), polychlorinated biphenyls (PCBs), and natural attenuation assessment (NAA) parameters.

Wells sampled for this round are shown in Figure 3-1; the chemical analyses performed for each sample are listed in Table 3-1. Monitoring wells were purged before sample collection using low-flow-purging techniques. Groundwater purging and sampling were accomplished using a

peristaltic pump fitted with dedicated, disposable, Teflon®-lined tubing, or by a submersible pump positioned in the center of the well's saturated-screen length. The pumping rate during purging ranged between 100 to 300 milliliters per minute (ml/min) and was constantly measured using a graduated cylinder. The purge rate was adjusted but was not allowed to fall below 100 ml/min, to minimize drawing the water level below its static water level.

Water level drawdown measurements and groundwater parameters were collected every five to 10 minutes until purging was complete. Groundwater parameters, including pH (a measure of acidity and alkalinity), temperature, specific conductance, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity, were also measured during purging. These data were recorded on low-flow purge data sheets. Water quality parameters were measured with an inline water quality meter. Turbidity readings were collected using a separate turbidity meter. Groundwater purging and sample record sheets are in Appendix B.

Purging was considered complete when the monitored water quality parameters stabilized, when three saturated well casing volumes had been removed, or the well had been purged dry. Stabilization was considered achieved when three consecutive readings, taken at five-minute intervals, were within ±0.1 standard units for pH, ±3% for specific conductance and temperature, ±10% for DO and ORP, and less than 10 nephelometric turbidity units for turbidity. If the monitoring well was purged dry, the water level was allowed to recover at least 80% of its initial static water level before groundwater sampling. All purged water was collected in United States Department of Transportation (USDOT)-approved 55-gallon steel drums that were staged in the central portion of the MRC D-lot.

The monitoring wells were sampled after purging, using the same dedicated tubing or submersible pump that had been used during purging. Groundwater was pumped directly into certified-clean sample containers supplied by the analytical laboratory. Sample containers for VOC analyses were filled directly, to minimize VOC losses. Groundwater samples for VOCs were collected first, followed by samples to be analyzed for 1,4-dioxane, PCBs, metals, perchlorate, and NAA parameters.

3.3 WELL REPAIR

In 2013, all MRC monitoring wells were inspected and repairs were completed for 36 wells. Wells were inspected during the 2013 groundwater sampling program and included a written survey of existing well conditions and a list of required repairs. Repairs completed in 2013 include replacing bolts for 29 well covers, replacing protective well covers and concrete pads for six wells, and modifying the well casing for one well. The well requiring casing replacement was resurveyed by a professional surveyor to establish the new casing elevation (i.e., vertical coordinate). Details of the well repairs are in Appendix C.

3.4 LABORATORY ANALYSES

Samples from the wells listed in Table 3-1 were analyzed for the following chemicals:

- VOCs, by United States Environmental Protection Agency (USEPA) Method 8260: samples from 99 on-site wells and 21 off-site wells
- 1,4-dioxane, by USEPA Method 8270C selected ion monitoring (SIM): samples from 56 on-site wells and 21 off-site wells
- PCBs, by USEPA Method 8082: samples from six on-site wells in Block E near elevated soil PCB concentrations, and a prior PCB detection in groundwater
- total metals, by USEPA Method 6020B: samples from 96 on-site wells
- perchlorate, by USEPA Method 314: samples from 27 on-site wells
- NAA parameters: 16 wells analyzed by USEPA SW846 protocols for the NAA parameters of nitrate/nitrite, ammonia nitrogen, orthophosphate, sulfate, total alkalinity, total calcium, total iron, total magnesium, total manganese, total potassium, total sodium, silicon dioxide, total dissolved solids, methane, ethane, ethene, total organic carbon, and chloride

Samples were analyzed by TestAmerica, Inc., of North Canton, Ohio. No duplicates were collected during this investigation, to provide a cost-effective sampling program, and because earlier MRC groundwater duplicate sampling and data validation reviews indicated satisfactory quality assurance/quality control (QA/QC). Trip blank (TB) samples were analyzed for VOCs for QA/QC purposes and submitted at a rate of one per cooler of VOCs per day. Matrix-spike/matrix-spike-duplicate samples were collected and analyzed on a 1:20 basis.

3.5 DOCUMENTATION

A master site logbook was maintained to document field activities. Sample documentation consisted of completed chain-of-custody (COC) reports and matrix-specific sample log sheets. The COC report is a standardized form summarizing and documenting pertinent sample information such as sample identification and type, matrix, date and time of collection, preservation, and requested analysis. Sample custody procedures document sample acquisition and integrity. COC are included as part of the data validation reports discussed in Section 3.9.

3.6 EQUIPMENT DECONTAMINATION

Reusable equipment (e.g., water-level meter, submersible pump) was decontaminated before and after each use. Decontamination of reusable small equipment involved the following:

- Liquinox® (a laboratory-grade, phosphate-free, ionic/anionic surfactant) and potable-water wash
- potable-water rinse
- distilled-water rinse
- air drying

Decontamination rinsate water was transferred into 55-gallon drums staged in the central portion of the MRC D-lot for subsequent disposal. Dedicated and/or disposable equipment that did not require decontamination was used for groundwater purging/sampling.

3.7 WASTE MANAGEMENT

Well purge-water was collected as investigation-derived waste (IDW) in USDOT–approved 55-gallon steel drums. The drums were stored at an approved central staging area on the facility's D-lot, pending waste-profile sampling results. Envirite, Inc. (a state-licensed waste transporter) sampled the IDW and deemed it non-hazardous. Upon receipt of the IDW analytical data, Clean Harbors, Inc. removed the IDW from the MRC, and properly disposed of it as non-hazardous waste at a Lockheed Martin Corporation (Lockheed Martin)-approved waste treatment facility in accordance with federal, state, and local regulations.

3.8 GENERAL SAMPLING PROCEDURES, NOMENCLATURE, AND HANDLING

A master site logbook was maintained for the sampling program to document field activities. Each sample collected was given a unique sample identification consisting of the well name and sampling date (e.g., MRC-MW93A-032113). Trip blanks were labeled with a "TB" prefix followed by a six-digit submittal date (e.g., TB-032113). Sample handling included field-related considerations concerning selection of sample containers, preservatives, allowable holding times, and analyses requested.

Proper custody procedures were followed throughout all phases of sample collection and handling. COC protocols were used throughout sample handling to document the integrity of sample containers. These protocols demonstrate that samples were handled and transferred in a manner that eliminates (or detects) possible tampering. Sample containers were released under signature from the laboratory and were accepted under signature by a responsible individual who maintained custody until the sample containers were transferred to the sampling team. Groundwater samples were released under signature from the sampling team and were accepted under signature by the laboratory. Transport containers returning to the laboratory were sealed with strapping tape and a tamper-resistant custody seal. The custody seal shows the signature of the individual releasing the transport container, along with the date and time. Signed COC are provided as part of the data validation reports discussed in the next section.

3.9 DATA VALIDATION

Data validation involves having a party independent of the analytical laboratory review the laboratory data to ensure that specific criteria are met. These criteria are concerned with specifications that are not sample-dependent; they specify performance requirements that should be fully under a laboratory's control. For organic data analyses, specific validation areas include blanks, performance evaluation standard materials, and instrument performance checks. For inorganic data analyses, specific validation areas include blanks, calibration standards, calibration verification standards, laboratory control standards, and interference check standards.

Chemical data were supplied by the laboratory as hard-copy reports and electronic databases. After sampling was complete, the chemical data were validated to assess their reliability and accuracy, in accordance with established USEPA protocols. This review was based on USEPA

Region 3 guidelines (USEPA, 1993 and 1994) and the specifics of the analytical method employed. Data validation reports with COC are in Appendix D.

Collectively, the data are acceptable for their intended use, except for data that have been qualified as unreliable. For this validation, the following data qualifiers (i.e., flags) were applied to the chemical results presented in this report:

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

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

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

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

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

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

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

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

UR The result is considered to be qualitatively or quantitatively unreliable.

Several of these flags (i.e., *J, K, L* and NJ) appear on the chemical results tables in Section 4; all flags can be found in Appendices D and E.

Common laboratory or field contaminants may occasionally be detected in the samples. Analyses of quality control blanks and other internal laboratory blanks (e.g., method blanks, etc.) are used to determine the significance of the analytical results versus possible laboratory or field contaminants. USEPA national functional laboratory guidelines require that results for common laboratory contaminants such as acetone, methylene chloride, and 2-butanone be qualified

(i.e., flagged with a *B*) when the sample concentration is less than 10 times the concentration detected in the blank. VOCs results were flagged infrequently.

In this sampling round, any compound detected in both the sample and an associated blank was qualified (i.e., flagged with a *B*) when the sample concentration was less than five times the concentration detected in the blank; ammonia nitrate, antimony, cobalt, copper, mercury, molybdenum, nickel, silver, and zinc were reported with *B* qualifiers, indicating blank contamination. Molybdenum was the most frequently *B*–qualified metal, with 14 qualified results. Blank contamination was not detected for the 1,4-dioxane and PCB analyses; therefore, no *B* flags were applied to these results. The *B*-qualified results are reported in the Section 4 tables as non-detects, because the results are considered artifacts of the laboratory analyses.

3.10 DATA MANAGEMENT

Laboratory data-handling procedures met the requirements set forth in the laboratory subcontract. All analytical and field data are maintained in the project files. The project files contain copies of the COC, samplinglog forms, sampling location maps, and data quality-assurance documentation.

3.10.1 Data Tracking and Control

A “cradle to grave” sample tracking system was used from the beginning to the end of the sampling event. The field operations leader coordinated sample tracking before field mobilization. Sample jar labels were handwritten in the field. Labels were reviewed to ensure their accuracy and adherence to work plan requirements. The project manager’s (PM) assistant coordinated with the analytical laboratory to ensure that they were aware of the number and type of samples and analyses to expect.

When field sampling was underway, the field operations leader forwarded the COC to the PM’s assistant and to the laboratory for each day that samples were collected. The PM’s assistant confirmed that the COC provided the information required by the work plan. This allowed early detection of errors made in the field so adjustments could be made while the field team was mobilized. The laboratory submitted an electronic deliverable for the sample delivery groups. When all electronic deliverables had been received from the laboratory, the PM’s assistant confirmed that the laboratory performed all analyses requested.

3.10.2 Sampling Information

Data from field measurements were recorded using the appropriate log sheets, as per Tetra Tech, Inc. (Tetra Tech) standard operating procedure SA-6.3. Reduction of field data entailed summarizing and presenting these data in tabular form. Reduction of laboratory data entailed manipulating raw data-instrument output into reportable results. Laboratory data were verified by the group supervisor and then by the laboratory's quality control/documentation department.

3.10.3 Project Data Compilation

The analytical laboratory generated an Adobe *Acrobat*® portable document format (PDF) file of the analytical data packages, as well as an electronic database deliverable. The electronic database was checked against the PDF file provided by the laboratory and updated as required, based on data qualifier flags applied during data validation. Data generated during implementation of the sampling and analysis plan were incorporated into the MRC environmental geographic information system (GIS) database. All data (such as units of measure and chemical nomenclature) were checked to maintain consistency with the project database.

3.10.4 Geographical Information System

The data management system for this effort consists of a relational database and GIS to manage environmental information pertaining to MRC. The relational database stores chemical, geological, hydrogeologic, and other environmental data collected for the MRC environmental investigations. The GIS is built from the relational database and contains subsets of the larger data pool. Using the GIS, environmental data were posted onto base maps to represent the information graphically for this report.

TABLE 3-1

WELLS SAMPLED, CHEMICAL ANALYSES, AND LABORATORY ANALYTICAL METHODS
MARCH-MAY, 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Volatile Organic Compounds	1,4-Dioxane	Perchlorate	Total Metals	PCBs	Natural Attenuation Parameters
MRC-MW01A			x	x		
MRC-MW02A	x			x		
MRC-MW03A				x		x
EXT-MW03						
MRC-MW04A				x		
EXT-MW04				x		
MRC-MW05A				x		
MRC-MW06A				x		
EXT-MW06		x				
MRC-MW07A		x		x		
MRC-MW08A	x	x	x	x		
MRC-MW08B	x	x	x			
MRC-MW09A						
MRC-MW10A	x	x		x		
MRC-MW11A	x	x		x		
MRC-MW11C	x	x				
MRC-MW12A	x	x		x		x
MRC-MW12B	x	x		x		x
MRC-MW12C	x	x				
MRC-MW13A	x	x				
MRC-MW14A	x	x		x		
MRC-MW14B	x	x		x		x
MRC-MW14C	x	x		x		
MRC-MW15A		x		x		
MRC-MW16A	x	x		x		
MRC-MW17A	x	x	x	x		
MRC-MW18A		x		x		
MRC-MW19A	x	x		x		
MRC-MW20A		x		x		
MRC-MW21A	x	x		x		
MRC-MW21B	x	x		x		x
MRC-MW22A	x	x		x		
MRC-MW22B	x	x		x		
MRC-MW23A						
MRC-MW24A				x		x
MRC-MW25A	x	x		x		x
MRC-MW26A				x		
MRC-MW27A	x			x		x
MRC-MW27B	x			x		x
MRC-MW27C	x					
MRC-MW28A						
MRC-MW29A	x			x		
MRC-MW30A				x		
MRC-MW31A				x		
MRC-MW32A	x					
MRC-MW33A	x			x		
MRC-MW34A	x					
MRC-MW34B	x			x		x
MRC-MW34C	x					
MRC-MW35A						
MRC-MW36A						
MRC-MW37A	x			x		x
MRC-MW37B	x					x
MRC-MW37C	x					
MRC-MW38A	x					

TABLE 3-1

WELLS SAMPLED, CHEMICAL ANALYSES, AND LABORATORY ANALYTICAL METHODS
MARCH-MAY, 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Volatile Organic Compounds	1,4-Dioxane	Perchlorate	Total Metals	PCBs	Natural Attenuation Parameters
MRC-MW38B	x					
MRC-MW39A						
MRC-MW40A						
MRC-MW41A	x	x	x	x		
MRC-MW42A				x		
MRC-MW43A					x	
MRC-MW44A		x			x	
MRC-MW45A						
MRC-MW46A				x		
MRC-MW47A						
MRC-MW48A	x			x		x
MRC-MW49A	x		x	x		
MRC-MW50A	x		x	x		
MRC-MW51A			x	x		
MRC-MW52A			x	x		
MRC-MW53A	x	x	x	x		
MRC-MW53B	x	x	x	x		
MRC-MW54A		x	x			
MRC-MW55A						
MRC-MW56A				x		
MRC-MW57A	x			x		
MRC-MW58A	x	x				
MRC-MW59A				x		
MRC-MW60A	x		x	x		
MRC-MW60B	x		x	x		x
MRC-MW61A				x		
MRC-MW62A				x	x	
MRC-MW62C				x	x	
MRC-MW63A	x	x		x		
MRC-MW64A			x			
MRC-MW65A						
MRC-MW66A				x		
MRC-MW67A				x		
MRC-MW68A				x		
MRC-MW69A	x	x	x	x		
MRC-MW69B	x	x	x			
MRC-MW70A	x	x		x		
MRC-MW70B	x	x				
MRC-MW71A	x	x		x		
MRC-MW71B	x	x		x		
MRC-MW72A						
MRC-MW72B	x					x
MRC-MW73A						
MRC-MW73B	x					
MRC-MW74A	x		x			
MRC-MW74B	x		x			
MRC-MW74C	x					
MRC-MW75A			x	x		
MRC-MW76A	x			x		
MRC-MW76B	x			x		
MRC-MW77A	x			x		
MRC-MW78B	x			x		
MRC-MW79B	x			x		
MRC-MW80A		x		x		
MRC-MW80B	x	x				

TABLE 3-1

WELLS SAMPLED, CHEMICAL ANALYSES, AND LABORATORY ANALYTICAL METHODS
MARCH-MAY, 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

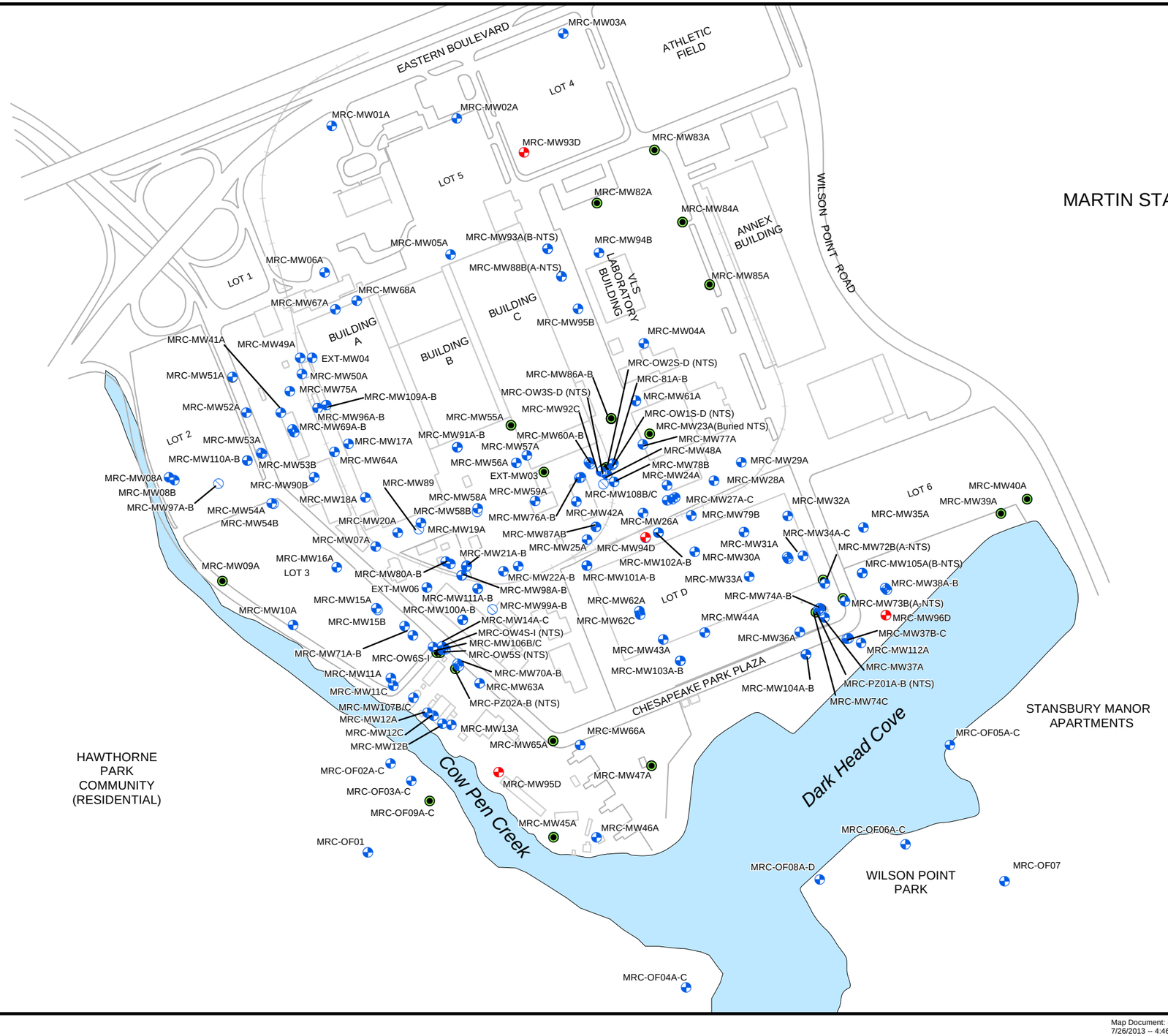
Well ID	Volatile Organic Compounds	1,4-Dioxane	Perchlorate	Total Metals	PCBs	Natural Attenuation Parameters
MRC-MW81A				x		
MRC-MW81B	x			x		x
MRC-MW82A						
MRC-MW83A						
MRC-MW84A						
MRC-MW85A						
MRC-MW86A	x			x		
MRC-MW86B	x			x		
MRC-MW87A	x					
MRC-MW87B	x			x		
MRC-MW88A						
MRC-MW88B	x					
MRC-MW90B	x	x	x			
MRC-MW91A		x				
MRC-MW91B						
MRC-MW92C	x			x		
MRC-MW93A	x			x		
MRC-MW93B						
MRC-MW93D	x	x		x		
MRC-MW94B	x					
MRC-MW94D	x	x		x		
MRC-MW95B	x					
MRC-MW95D	x	x		x		
MRC-MW96A	x	x	x	x		
MRC-MW96B	x	x	x	x		
MRC-MW96D	x	x		x		
MRC-MW98A	x	x		x		
MRC-MW98B	x	x		x		
MRC-MW100A	x	x				
MRC-MW100B	x	x		x		
MRC-MW101A	x					
MRC-MW101B	x					
MRC-MW102A	x					
MRC-MW102B	x			x		
MRC-MW103A					x	
MRC-MW103B					x	
MRC-MW104A	x					
MRC-MW104B	x			x		
MRC-MW105A				x		
MRC-MW105B						
MRC-MW106B/C	x					
MRC-MW107B/C	x			x		
MRC-MW109A	x		x	x		
MRC-MW109B	x		x	x		
MRC-MW110A	x	x	x	x		
MRC-MW110B	x	x	x	x		
MRC-MW111A	x	x				
MRC-MW111B	x	x		x		
MRC-MW112A	x			x		
MRC-PZ01A						
MRC-PZ01B						
MRC-PZ02A						
MRC-PZ02B						
MRC-OW1S						

TABLE 3-1

WELLS SAMPLED, CHEMICAL ANALYSES, AND LABORATORY ANALYTICAL METHODS
MARCH-MAY, 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Volatile Organic Compounds	1,4-Dioxane	Perchlorate	Total Metals	PCBs	Natural Attenuation Parameters
MRC-OW1I						
MRC-OW1D						
MRC-OW2S						
MRC-OW2I						
MRC-OW2D						
MRC-OW3S						
MRC-OW3I						
MRC-OW3D						
MRC-OW4S						
MRC-OW4I						
MRC-OW5S						
MRC-OW5D						
MRC-OW6S						
MRC-OW6I						
MRC-OF01	x	x				
MRC-OF02A	x	x				
MRC-OF02B	x	x				
MRC-OF02C	x	x				
MRC-OF03A	x	x				
MRC-OF03B	x	x				
MRC-OF03C	x	x				
MRC-OF04A	x	x				
MRC-OF04B	x	x				
MRC-OF04C	x	x				
MRC-OF05A	x	x				
MRC-OF05B	x	x				
MRC-OF05C	x	x				
MRC-OF06A	x	x				
MRC-OF06B	x	x				
MRC-OF06C	x	x				
MRC-OF07	x	x				
MRC-OF08A	x	x				
MRC-OF08B	x	x				
MRC-OF08C	x	x				
MRC-OF08D	x	x				
MRC-OF09A						
MRC-OF09B						
MRC-OF09C						
TOTAL 158	**120**	**77**	**27**	**96**	**6**	**16**

A - upper surficial aquifer
B - intermediate surficial aquifer
C - lower surficial aquifer
D - deep confined aquifer - wells MW93D through MW96D
EXT Existing (for wells installed prior to the VCP in 2002)
OF - off facility
OW - observation well
PCBs - polychlorinated biphenyls



MARTIN STATE AIRPORT

FIGURE 3-1

GROUNDWATER MONITORING WELLS SAMPLED, MARCH-MAY 2013

LEGEND

- SURFICIAL GROUNDWATER MONITORING WELL SAMPLED
- DEEP CONFINED AQUIFER GROUNDWATER MONITORING WELL (SAMPLED)
- WELL NOT SAMPLED
- ABANDONED WELL BORING
- SURFACE WATER

NTS NOT SAMPLED (FOR OBSCURED WELL SYMBOLS)

Lockheed Martin Middle River Complex
Middle River, Maryland

0 150 300 600 Feet

N

DATE MODIFIED: 7/26/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\2012 Middle River Groundwater Monitoring Locations_revised 072613.mxd)
7/26/2013 -- 4:46:42 PM

Section 4
Investigation Results

This section presents the March groundwater-elevation data and the analytical results of the March–May 2013 groundwater sampling effort. The field program measured static groundwater levels from Middle River Complex (MRC) monitoring wells and sampled groundwater from on-site and off-site wells for laboratory chemical analyses. Most groundwater samples (99 on-site and 21 off-site samples) were analyzed for volatile organic compounds (VOCs) and metals (96 on-site samples). Fifty-six on-site and 21 off-site samples were analyzed for 1,4-dioxane. Twenty-seven on-site samples were analyzed for perchlorate, and six on-site samples were analyzed for polychlorinated biphenyls (PCBs). Sixteen on-site samples were also analyzed for natural-attenuation assessment (NAA) parameters.

4.1 GROUNDWATER LEVEL DATA

Table 4-1 presents the March 2013 groundwater-level measurements (i.e., depth to groundwater measurements) and computed groundwater elevations at MRC. The groundwater depth measurements in the third column of Table 4-1 indicate that the groundwater table of the surficial aquifer is near the ground surface along the shorelines of Cow Pen Creek and Dark Head Cove (at wells MW08A, MW09A, MW12A, MW15A, MW39A, and MW40A) and in Block E (at wells MW30A, MW43A, MW44A, and MW62A). Groundwater depth measurements at or near 0.00 feet indicate groundwater at or near the top of the well casing, which is near the ground surface for most wells. Depth to surficial aquifer groundwater was measured at 11–19 feet deep north and west of Building A (at wells MW67A, MW50A and MW05A); approximately 15 feet deep in the northwestern corner of Block E (at well MW101A); and approximately 14 feet deep south of Building A (MW22A) and south of Building C (MW60A). The static groundwater surface (i.e., potentiometric groundwater level) is above the ground surface in intermediate and lower surficial aquifer wells MW08B (approximately three feet above the ground surface, indicated by a measurement of -3.00 feet above the casing) and MW12C (approximately one foot above the ground surface, indicated by measurement of -1.24 feet above the casing), and in the

deep confined aquifer well MW96D (approximately five feet above the well casing, indicated by measurement of -5.34 feet above the casing).

Figures 4-1 and 4-2 show the groundwater-elevation contour maps for the upper ("A" and "B") and lower ("C") surficial-aquifer wells, respectively. The March 2013 groundwater flow for the surficial aquifer is similar to that depicted in previous investigations. However, the March 2013 surficial aquifer groundwater elevations are generally higher than those collected in March 2012. As shown in Figure 4-1, shallow groundwater follows the site topography and flows radially from the hydraulically upgradient northern portion of the MRC (at Eastern Boulevard and immediately south of Buildings A, B, and C) to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek. Subsurface sandy zones act as preferential pathways for contaminant transport in groundwater, possibly originating from an upgradient source in the clay-rich materials. Groundwater in the lower surficial-aquifer (Figure 4-2) flows southeast from the area south of Buildings A–C toward Dark Head Cove.

4.2 GROUNDWATER CHEMICAL DATA: ON-SITE WELLS

Validated groundwater-chemical data were used to generate a statistical summary table (Table 4-2) and a "hits" table (Table 4-3) summarizing positive detections of chemical analytes for the May 2013 groundwater samples. Appendix E presents all analytical data, including non-detects. Table 4-2 lists the chemicals detected in groundwater, ranked from the most frequently detected to the least frequently detected. Gray shading in Table 4-3 indicates results exceeding Maryland groundwater standards. Chemical analysis results for the May 2013 groundwater sampling episode are discussed in the following sections.

4.2.1 Volatile Organic Compounds

Previous groundwater sampling and chemical analyses at the MRC from 2005–2012 demonstrate that trichloroethene (TCE) and benzene have formed well-defined plumes, indicating migration of these analytes from source areas. TCE is a common industrial solvent and metal degreaser, whereas benzene is a toxic constituent of petroleum fuels such as gasoline and, to a lesser extent, diesel fuel and heating oils. The 2013 results confirm TCE and benzene groundwater plumes previously identified in the central and downgradient portions of the MRC. Consistent with earlier results, current chemical data indicate that TCE and benzene are in groundwater at concentrations exceeding Maryland's groundwater standard (both are 5 micrograms per liter [µg/L]).

TCE and benzene results are discussed herein because they are primary indicators of solvent and petroleum VOC contamination, and are the VOCs in each group that most frequently exceed groundwater standards at MRC. Therefore, the distributions of TCE and benzene are evaluated to provide an overview of the primary VOC groundwater contamination at the MRC. Chlorinated VOC-degradation daughter products (e.g., dichloroethenes, vinyl chloride [VC], etc.) or other petroleum-related VOCs (e.g., methyl *tert*-butyl ether [MTBE], benzene isomers, naphthalene, etc.) are typically co-located with these primary VOCs.

Chlorinated volatile organic compounds (cVOCs)—TCE results are shown in Figure 4-3. Figure 4-3 and Table 4-2 show that in 2013 TCE was detected in shallow groundwater at several areas, with detected concentrations ranging from 0.17*J* µg/L at well MW12C (southwestern portion of MRC near Cow Pen Creek) to 40,000 µg/L at well MW74B (southeastern corner of MRC in recognized environmental condition [REC] #3), respectively. Tetrachloroethene (PCE), another chlorinated solvent and degreaser, was detected infrequently (in 5% of samples) and at concentrations ranging from 0.38 µg/L at well MW98A (near REC #9, the former 2,000-gallon waste oil underground storage tank [UST]) to 13 µg/L at MW60A (rear of Building C), with an average detected concentration of 4.69 µg/L. PCE is co-located with TCE in all cases, and exceeded its groundwater standard (5 µg/L) at wells MW16A, MW60A, and MW98B.

- *Eastern TCE plume:* As shown in Figure 4-3, the largest contiguous area containing samples with the highest concentrations of TCE in groundwater extends southeast from MW60B (5,100 µg/L) and MW81B (700 µg/L) at the southern end of Building C to well MW112A (4.3 µg/L), near Dark Head Cove. Maximum detected TCE concentrations of 40,000 µg/L, 5,100 µg/L, and 1,400 µg/L are reported for wells MW74B, MW60B, and MW74A, respectively. MW74A and MW74B are in the southeastern portion of the plume west and east (respectively) of the aboveground water tanks, while well MW60B is south of Building C.

    - The high TCE concentration at MW74B (40,000 µg/L) indicates the likely presence of dense non-aqueous-phase liquids (i.e., residual solvent product) in the general area. The discovery of a tank of waste TCE solvent during soil pre-remediation in the Tax Block E groundwater treatment area supports this theory. The tank contained full-strength TCE and appeared to be leaking. Soil under the tank was impacted by TCE. Soil that could easily be removed was removed before the excavation was stabilized. A TCE-impacted soil delineation and removal program is being developed for implementation this year, preferably before completion and startup of groundwater remediation in that area.

- The high concentrations at the north and south of the east plume, with no high concentrations between the north and south, suggest at least two distinct TCE-source areas.

- The maximum concentrations of TCE were detected in the intermediate depth of the surficial aquifer, in wells MW74B and MW60B, screened 30 feet below grade. The source(s) of this plume may originate from the south end of the Building C Basement (MW60B), or possibly from spills of material handled near MW60B and MW74A/B, or from a recently discovered UST near the former Building D foundation that was found to contain TCE product. At both areas, residual TCE may be trapped in silt and sand lenses in the clay-rich zones, and/or may be adsorbed to organic material and clays. From these source areas, dissolved TCE has presumably been released to groundwater and now moves preferentially to the southeast along the more permeable sandy and silty materials that extend from well MW48 southeastward to well MW37.

- The magnitudes and trend in TCE concentrations at MW74B suggests the well is close to non-aqueous source material (Figure 4-5 is a graph of TCE and daughter-product concentration trends for this well):

  - Year 2007 70,000 µg/L (installed Oct 11, 2007)
  - Year 2008 12,000 µg/L
  - Year 2009 17,000 µg/L
  - Year 2010 19,000 µg/L
  - Year 2011 23,000 µg/L
  - Year 2012 30,000 µg/L
  - Year 2013 40,000 µg/L

- *Western TCE plume:* As shown in Figure 4-3, the second largest contiguous area of TCE groundwater contamination extends from well MW21 (near REC #9, a former 2,000 gallon waste-oil UST), to MW12 (near Cow Pen Creek). The current maximum reported concentrations of TCE in this area are 2,300 µg/L at well MW14B (in the center of the plume) and 1,500 µg/L at well MW12A (in the southernmost portion of the plume, near Cow Pen Creek). Well MW98B (near well MW12) had a TCE concentration of 530 µg/L.

- *Other TCE areas:* As shown in Figure 4-3, TCE exceedances of the 5 µg/L groundwater standard were also detected at the western portion of the facility in wells MW96A-B (3,300 µg/L and 17*J* µg/L, respectively), MW90B (71 µg/L), MW53A (10 µg/L), MW53B (210 µg/L), MW109B (15 µg/L), MW110A-B (32 µg/L and 11 µg/L), MW50A (18 µg/L), and MW17A (9 µg/L). The maximum TCE concentration (3,300 µg/L) in this area was detected at well MW96A, located west of Building A.

- *Concentration trends for primary chlorinated VOCs:* Figures 4-4 through 4-6 are long-term time-series plots of TCE, *cis*-1,2-dichloroethene (*cis*-1,2-DCE), and vinyl chloride (VC) for eight selected MRC wells. Figure 4-4 (wells MW21B, MW14B, and MW12A) shows source and downgradient conditions in the western TCE plume. Source conditions in the eastern TCE plume are shown on Figure 4-5 (wells MW60B and

MW74B). Figure 4-6 (wells MW27B and MW37A/B) depicts downgradient conditions. Data from the 2005–2013 sampling events were used for these plots.

As shown in Figure 4-4, VOC concentrations in source areas of the western TCE plume (MW21B and MW14B) have fluctuated since 2005. In the northern portion of the plume (at well MW21B), TCE and *cis*-1,2-DCE groundwater concentrations decreased by 34-48% between 2005 and 2007. However, both TCE and *cis*-1,2-DCE concentrations have remained somewhat steady since 2007, with average fluctuations of approximately 560 µg/L and 5 µg/L, respectively. Recent TCE and *cis*-1,2-DCE concentrations (from 2009–2013) in the center of the plume at MW14B rebounded upward to the initial 2005 levels after rapidly decreasing by an order of magnitude from 2007–2008.

VOC concentrations downgradient of MW14B, at well MW12A (Figure 4-4), have been relatively stable, with slight increases since 2005; recently, however, TCE concentrations have been decreasing (1,900 µg/L in 2011, 1,800 µg/L in 2012, and 1,500 µg/L in 2013). Vinyl chloride has not been detected in either MW14B or MW12A since 2005 (Figure 4-4). These TCE trends, and the relatively low concentrations of *cis*-1,2-DCE and VC, suggest that TCE degradation is proceeding slowly in the western TCE plume.

Figure 4-5 shows VOC concentrations at two source-area wells (MW60B and MW74B) in the eastern TCE plume. Figure 4-6 shows three downgradient wells (MW27B and MW37A/B). VOC concentrations for both northern (MW60B) and southern (MW74B) source-area wells increased steadily over the six-year monitoring period (2007–2013), with a slight decrease at MW60B from 2011 to 2012. Concentrations of TCE at MW60B increased by a factor of five over four years, from 810 µg/L in 2007 to 5,500 µg/L in 2011. At well MW27B, downgradient of the well MW60B, TCE concentrations nearly doubled from 2005–2008, decreased rapidly in 2009–2010, then increased again in 2011-2012; concentrations have remained relatively steady in 2013 (Figure 4-6). VOCs at well cluster MW37, also hydraulically downgradient of MW74B, generally decreased at MW37A. From 2005 to 2009, VOC concentrations at MW37B increased, followed by a 50% decrease in 2010; concentrations then increased again in 2011–2012 to concentrations similar to 2009 levels. These TCE trends, and the relatively low concentrations of *cis*-1,2-DCE and VC, suggest that TCE degradation is proceeding slowly in the eastern TCE plume.

- *Natural-attenuation parameters:* In addition to the standard analyses for VOCs, the laboratory analyzed 16 groundwater samples for several NAA parameters. Fifteen plume wells and one background well (MW03A) were sampled for these parameters. The NAA analyses include alkalinity, ammonia nitrogen, chloride, nitrate, orthophosphate, sulfate, total dissolved solids, iron, manganese, potassium, and the dissolved gasses ethane, ethene, and methane. NAA parameters were also measured in the field. Field measurements include groundwater pH (a measure of acidity or alkalinity), oxidation-reduction potential (ORP), dissolved oxygen (DO), and temperature.

  These analyses will help evaluate whether VOCs are undergoing anaerobic reductive-dechlorination at the site, and whether site conditions can be enhanced by adding electron donor and/or pH adjustment to the groundwater to stimulate anaerobic reductive-dechlorination. These results will also be used as input for ongoing

groundwater-contaminant modeling, and in the evaluation and design of groundwater remedial alternatives. NAA results are in Tables 4-4 through 4-6, and are briefly discussed in this report.

Table 4-4 presents the VOC and NAA results for wells MW14B and MW21B, located in the central and northern portions of the western TCE plume, respectively, and NAA results for wells MW12A and MW12B, located at the southwestern edge of the western TCE plume near Cow Pen Creek. Well MW14B has historically had the highest TCE concentrations in the western plume, and represents one of the TCE source areas at MRC. Chemical and NAA results offer limited evidence of biodegradation in the central and northern portions of this plume.

The presence of TCE and degradation products such as 1,1-dichloroethene and *cis*-1,2-DCE in wells MW14B and MW21B indicate that some biodegradation is occurring; however, the lack of detectable or elevated concentrations of lower-chain degradation products such as VC, chloroethane, ethene, and ethane, suggest that complete mineralization either is not occurring or is occurring slowly. Limited evidence of biodegradation is further supported by the NAA data, which do not indicate favorable subsurface conditions in these areas. NAA results suggest unfavorable conditions for biodegradation at both wells, including alkalinity and chloride levels less than background concentrations, a high sulfate concentration (MW14B), low or marginal pH, high ORP, high DO (MW14B), and temperatures less than 20 degrees Celsius. Limited biodegradation at MW14B and MW21B is also indicated by somewhat consistent TCE concentrations over time (see Figure 4-4). Groundwater conditions at MW12A and MW12B near Cow Pen Creek are similar to conditions at MW14B and MW21B, except both wells have slightly higher (more favorable) pH levels and lower (favorable) sulfate concentrations. However, limited biodegradation is apparent at MW12A, as indicated by the constant TCE and *cis*-1,2-DCE concentrations over time (Figure 4-4).

Table 4-5 presents the VOC and NAA results for seven wells in the northern portion of the eastern TCE plume. Wells MW60B, MW48A, and MW81B are in the northern source area near the rear of Building C. Wells MW24A, MW25A, MW27A, and MW27B are south/southeast and downgradient of the source area wells. Well MW60B has historically had the highest concentrations of TCE in the northern portion of the eastern TCE plume, and represents one of the major TCE source areas at the MRC.

Chemical and NAA results for MW60B offer limited evidence of biodegradation in this part of the plume. The presence of TCE and degradation products such as *cis*-1,2-DCE and methane indicate some biodegradation is occurring; however, the relatively low concentrations of daughter products, and the lack of detectable lower-chain degradation products such as VC, chloroethane, and ethene, suggest that complete mineralization either is not occurring, or is occurring slowly. The limited evidence of biodegradation at MW60B is further supported by the NAA results, several of which do not indicate favorable subsurface conditions in this area.

The NAA analyses at MW60B that suggest unfavorable conditions for biodegradation include low alkalinity, chloride, marginal DO, and a temperature less than 20 degrees Celsius. However, iron, nitrate, sulfate, pH, and ORP within range indicate

that some favorable factors existed during this round of sampling. Figure 4-5 supports the assumption that only limited biodegradation is occurring, indicated by increasing TCE concentrations over time.

Conditions for biodegradation appear slightly more favorable away from MW60B, as indicated by the VOC and NAA results for the other wells on Table 4-5. Except for MW25A, several lower-chain degradation products (*cis*-1,2-DCE, VC, methane, ethane, and ethene) were detected, and many were found at relatively high concentrations with respect to the TCE-parent concentrations (Table 4-5). Slightly more favorable conditions for biodegradation are present at several wells: chloride concentrations greater than two times background concentration (MW81B, MW24A, and MW27A), and a low ORP at MW81B. However, high sulfate and DO at MW27A indicate less favorable conditions at this well, although limited biodegradation is indicated at MW27B by somewhat consistent or slightly increasing TCE concentrations over time (Figure 4-5).

Table 4-6 presents the VOC and NAA results for four wells in the southern portion of the eastern TCE plume. Wells MW34B and MW72B are along the northern and northeastern plume boundaries. Wells MW37A and MW37B are in the southern edge of the plume. The VOC and NAA results offer limited evidence that biodegradation is occurring in the central portion of this plume. The absence or low concentrations of degradation products such as *cis*-1,2-DCE, VC, chloroethane, ethane, and ethane at MW72B, MW37A, and MW37B suggest that complete mineralization either is not occurring, or is occurring slowly. The limited evidence of biodegradation at these wells is further supported by NAA results, several of which do not indicate favorable subsurface conditions in this area.

NAA results suggestive of unfavorable conditions for biodegradation at these wells include low alkalinity and chloride levels, and high ORP, high DO, and low temperature. High sulfate concentrations, high ORP and DO, and temperatures less than 20 degrees Celsius also suggest unfavorable conditions for biodegradation. Additionally, groundwater at wells MW72B and MW34B have low (unfavorable) pH levels. Nitrate concentrations at most wells and pH levels at MW37A and MW37B are favorable for biodegradation. Biodegradation is indicated at MW37A by significant reductions of both TCE and *cis*-1,2-DCE over time (Figure 4-6); however, TCE concentrations have steadily increased at MW74B (Figure 4-5), and have remained relatively steady at MW37B.

***Benzene*—**Figure 4-7 presents benzene results for the 2013 groundwater sampling and analyses. The highest concentrations of benzene would likely be encountered in shallow groundwater near source areas, because fuels in product form are less dense than water and, when present above the solubility limit, will float on top of the groundwater. Recharge (i.e., infiltrating precipitation) and downward hydraulic gradients may drive dissolved benzene and other petroleum-related contaminants downward in the aquifer as the contaminant travels farther from the source areas. However, dissolved oxygen in shallow groundwater provides favorable conditions for the rapid decay and mineralization of fuel-related VOCs, including benzene.

Some wells had increased benzene concentrations in 2013, while others had decreased from the 2012 levels. Increases from 2012–2013 were observed at four areas of maximum benzene concentrations, in wells MW96B (520 µg/L in 2012 to 560 µg/L in 2013), MW17A (68 µg/L to 110 µg/L), MW21B (19 µg/L to 23 µg/L), and MW77A (16 µg/L to 18 µg/L). Benzene decreased at MW53B (96 µg/L in 2012 to 0.84J µg/L in 2013), MW109B (230 µg/L to 37 µg/L), and MW110B (10 µg/L to 3.3 µg/L).

Most of these wells are west of Building A, near a former 4,000-gallon gasoline UST (REC #14) and abandoned underground wastewater lines (REC #18). Well MW21B is southeast of Building A (REC #9) and MW77A is on the east side of the vertical assembly building at REC #8, the location of an abandoned-in-place 25,000-gallon fuel oil UST. Consistent with the 2008–2012 benzene results, benzene was not detected at several locations where it had been detected at low concentrations in 2005 (e.g., MW12A, MW27B, MW34B, MW37A, and MW60A).

4.2.2 1,4-Dioxane

As shown in Table 4-2 and Figure 4-8, the SVOC 1,4-dioxane was detected in 37 groundwater samples collected in 2013 at concentrations ranging from 0.68*J* µg/L at MW111A to 270 µg/L at MW14B. 1,4-Dioxane was not detected in any of the off-site well samples. Several states (e.g., California, Colorado, Connecticut, Florida, Maine, Massachusetts, Michigan, and North Carolina) have established drinking water standards or action levels for 1,4-dioxane, ranging from 3 µg/L (California's action level) to 85 µg/L (Michigan's drinking water standard) (United States Environmental Protection Agency [USEPA], 2006 and 2009). USEPA has also published a risk-based preliminary remedial goal of 6.1 µg/L for 1,4-dioxane in tap water (USEPA 2010).

At present, Maryland has not established an advisory level or standard for 1,4-dioxane in drinking water or groundwater. Therefore, the current advisory level/standard that is most protective of human health (the California Department of Health Services action level of 3 µg/L) is used as a screening level for 1,4-dioxane concentrations in groundwater. Concentrations exceeding the California action level (3 µg/L) are shown within the contours in Figure 4-8. The average of all 1,4-dioxane detections is 24.4 µg/L, and the average of all samples (including non-detects) is 11.9 µg/L (Table 4-2). The highest concentrations occur primarily in the upper and intermediate surficial-aquifer wells, with the highest reported concentration (270 µg/L)

occurring at well MW14B, located in the western TCE plume within Block G and REC #11 (i.e., southwestern portion of the MRC).

1,4-Dioxane was detected in several wells in the western TCE plume, ranging from 0.68 µg/L at well MW111A (north of Tilley Chemical) to 270 µg/L at MW14B (in REC #11 northwest of the former sewerage treatment plant). 1,4-Dioxane in this area of the MRC extends from well MW91A near the rear of Building B to well MW12A-B, located adjacent to Cow Pen Creek. 1,4-Dioxane was also detected at concentrations exceeding the advisory level west and southwest of Building A in samples for wells MW53B (10 µg/L), MW18A (5.2 µg/L), MW90B (3.7 µg/L), and MW96A (3.5 µg/L).

Historically, 1,4-dioxane has not been detected extensively in the eastern TCE plume; an exception is well MW44A, at the southeastern end of the eastern TCE plume (Tax Block E), where the detected concentration in 2013 (2.4 µg/L) was lower than the screening level (3 µg/L). 1,4-Dioxane was not analyzed for at other wells in this portion of the MRC, in this round and other recent rounds, due to low historical concentrations (i.e., below the screening criterion and non-detects). 1,4-Dioxane was not detected in samples collected from the four deep, confined-aquifer wells (MW93D, MW94D, MW95D, and MW96D).

4.2.3 Polychlorinated Biphenyls

Groundwater samples from six wells were analyzed for PCBs (see Table 4-3) in the area where elevated PCBs have previously been detected in soil (see highlighted area in Figure 4-9). The wells sampled for PCBs include MW43A, MW44A, MW62A, MW62C, MW103A, and MW103B. Consistent with the 2012 results for these wells, PCBs were not detected in any groundwater samples collected this round. PCBs were detected in well MW43A (0.24 µg/L) in 2011; this is the well nearest the area of elevated PCBs detected in Block E soil. However, this 2011 PCB concentration was less than half the Maryland Department of the Environment (MDE) groundwater standard (0.5 µg/L).

4.2.4 Metals

Metals concentrations above MDE standards are found throughout the MRC (previous site-wide plots of beryllium, cobalt, and nickel can be found in Tetra Tech [2009a]). Table 4-3 summarizes detections of metals in the groundwater samples. As shown in Table 4-7 (a summary of metals

that exceed Maryland groundwater standards), concentrations of 12 metals exceed Maryland groundwater standards in one or more groundwater samples.

Concentrations of manganese, iron, and nickel exceed the standards most frequently (88% of 16 samples, 81% of 16 samples, and 60% of 96 samples, respectively), with the maximum concentrations of these metals exceeding standards by more than two orders of magnitude (greater than 100 times). Concentrations of beryllium and vanadium exceed their standards in 33% and 8% of samples, respectively, with the maximum beryllium (400*K* µg/L) and vanadium (81*J* µg/L) concentrations exceeding groundwater standards by more than an order of magnitude. Concentrations of the remaining metals (cadmium, zinc, antimony, barium, chromium, copper, and lead) exceeded standards in three or fewer samples, or in 1–3% of samples collected. Maximum concentrations of these metals (except chromium) exceed standards by a factor of less than five. The maximum chromium concentration exceeds its standard by a factor of less than seven.

4.2.5 Perchlorate

As shown in Table 4-2 and Figure 4-10, perchlorate was detected in 13 (48%) of 27 groundwater samples analyzed for perchlorate in 2013. Detected concentrations of perchlorate range from 0.1*J* µg/L (MW52A) to 9.3 µg/L (MW53B). Of the 13 detected concentrations of perchlorate, only two concentrations (9.3 µg/L at well MW53B and 3.6 µg/L at well MW96B) exceed the groundwater standard (2.6 µg/L). Both wells are west of Building A in the western portion of the MRC. Perchlorate had previously been detected in wells west of Building A, but most detected concentrations were less than the groundwater standard (2.6 µg/L).

4.3 GROUNDWATER-CHEMICAL DATA OFF-SITE WELLS

Twenty-one off-site wells installed in the surficial aquifer were sampled in 2013 for VOCs and 1,4-dioxane. These wells are sampled every three years to confirm that MRC groundwater constituents have not migrated to areas on the western side of Cow Pen Creek and the southern side of Dark Head Cove. Wells MRC-OF09A-C could not be sampled this round because a private vehicle was parked over the flush-mounted protective casing, which prevented access to these wells.

Results for the off-site well sampling are listed in Table 4-3 and are shown in Figures 4-3 (TCE), 4-7 (benzene), and 4-8 (1,4-dioxane). The table and figures show that major VOCs found in MRC groundwater plumes (TCE, *cis*-1,2-DCE, VC, and benzene) and 1,4-dioxane (found in the western TCE plume) were not detected in groundwater samples collected from off-site wells. Single trace concentrations each of chloroform (well MRC-OF04A), 1,4-dichlorobenzene (well MRC-OF04C), and methyl *tert*-butyl ether (MRC-OF01) were detected in off-site wells this round. However, these detections are limited to two geographic locations (wells MRC-OF01 and well cluster MRC-OF04A/C), and all VOC concentrations are less than state groundwater-screening levels. Methyl *tert*-butyl ether is a constituent of gasoline, and may be present due to fuels used for vehicles and small gasoline-powered equipment (e.g., lawn mowers, fuel storage, etc.) in the street/residential area where well MRC-OF01 is located. Acetone was also detected in three samples; however, acetone is a common laboratory contaminant, and these results are considered artifacts of laboratory analyses.

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, MARCH 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Elevation Top of Well Casing Feet (NAVD 1988)	Depth to Groundwater 3/12/2013 Below Top of Casing (Feet)	Groundwater Elevation 3/12/2013 NAVD 1988 (Feet)
MRC-MW01A	33.63	NM	--
MRC-MW02A	28.41	7.30	21.11
MRC-MW03A	28.17	1.55	26.62
EXT-MW03	35.97	NM	--
MRC-MW04A	24.43	2.30	22.13
MRC-EXT-MW04	34.22	16.14	18.08
MRC-MW05A	35.15	11.60	23.55
MRC-MW06A	31.82	11.95	19.87
MRC-EXT-MW06	31.63	9.18	22.45
MRC-MW07A	33.39	11.84	21.55
MRC-MW08A	9.70	0.01	9.69
MRC-MW08B	9.70	-3.00	3.00
MRC-MW09A	8.26	0.01	8.25
MRC-MW10A	9.52	1.12	8.40
MRC-MW11A	11.90	1.11	10.79
MRC-MW11C	11.45	1.02	10.43
MRC-MW12A	9.29	0.18	9.11
MRC-MW12B	9.56	1.89	7.67
MRC-MW12C	9.83	-1.24	11.07
MRC-MW13A	10.31	1.09	9.22
MRC-MW14A	16.67	1.78	14.89
MRC-MW14B	15.88	3.97	11.91
MRC-MW14C	15.88	5.65	10.23
MRC-MW15A	16.80	-0.04	16.84
MRC-MW16A	17.20	-0.33	17.53
MRC-MW17A	32.59	6.78	25.81
MRC-MW18A	32.46	4.30	28.16
MRC-MW19A	36.36	8.38	27.98
MRC-MW20A	36.18	8.32	27.86
MRC-MW21A	32.70	1.72	30.98
MRC-MW21B	32.91	9.48	23.43
MRC-MW22A	31.58	13.73	17.85
MRC-MW22B	31.04	-0.24	31.28
MRC-MW23A	25.37	NM	--
MRC-MW24A	20.77	7.62	13.15

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, MARCH 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Elevation Top of Well Casing Feet (NAVD 1988)	Depth to Groundwater 3/12/2013 Below Top of Casing (Feet)	Groundwater Elevation 3/12/2013 NAVD 1988 (Feet)
MRC-MW25A	26.71	10.83	15.88
MRC-MW26A	22.90	10.00	12.90
MRC-MW27A	20.76	9.55	11.21
MRC-MW27B	20.90	9.80	11.10
MRC-MW27C	21.35	12.70	8.65
MRC-MW28A	17.45	6.85	10.60
MRC-MW29A	13.97	4.90	9.07
MRC-MW30A	11.14	0.04	11.10
MRC-MW31A	11.00	2.35	8.65
MRC-MW32A	11.01	3.00	8.01
MRC-MW33A	11.08	1.67	9.41
MRC-MW34A	10.88	3.34	7.54
MRC-MW34B	10.84	3.24	7.60
MRC-MW34C	10.80	3.07	7.73
MRC-MW35A	8.39	0.00	8.39
MRC-MW36A	9.72	5.07	4.65
MRC-MW37A	10.50	5.76	4.74
MRC-MW37B	7.36	4.07	3.29
MRC-MW37C	7.45	5.10	2.35
MRC-MW38A	8.07	2.86	5.21
MRC-MW38B	8.18	3.50	4.68
MRC-MW39A	4.78	-0.56	5.34
MRC-MW40A	4.50	-0.60	5.10
MRC-MW41A	27.52	NM	--
MRC-MW42A	28.21	11.52	16.69
MRC-MW43A	11.01	0.97	10.04
MRC-MW44A	10.64	0.55	10.09
MRC-MW45A	4.64	NM	--
MRC-MW46A	6.40	2.15	4.25
MRC-MW47A	10.75	-0.35	11.10
MRC-MW48A	24.76	7.81	16.95
MRC-MW49A	31.47	12.89	18.58
MRC-MW50A	30.15	14.15	16.00
MRC-MW51A	21.88	0.75	21.13
MRC-MW52A	20.32	5.30	15.02

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, MARCH 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Elevation Top of Well Casing Feet (NAVD 1988)	Depth to Groundwater 3/12/2013 Below Top of Casing (Feet)	Groundwater Elevation 3/12/2013 NAVD 1988 (Feet)
MRC-MW53A	18.54	4.26	14.28
MRC-MW53B	18.41	4.75	13.66
MRC-MW54A	17.05	3.14	13.91
MRC-MW55A	36.56	12.89	23.67
MRC-MW56A	35.94	NM	--
MRC-MW57A	36.46	9.21	27.25
MRC-MW58A	35.03	0.06	34.97
MRC-MW59A	34.11	10.08	24.03
MRC-MW60A	31.26	13.96	17.30
MRC-MW60B	30.21	12.93	17.28
MRC-MW61A	24.16	NM	--
MRC-MW62A	10.62	0.45	10.17
MRC-MW62C	10.89	2.40	8.49
MRC-MW63A	16.20	0.58	15.62
MRC-MW64A	30.88	6.32	24.56
MRC-MW65A	14.76	3.12	11.64
MRC-MW66A	14.99	4.66	10.33
MRC-MW67A	36.67	19.14	17.53
MRC-MW68A	36.51	13.14	23.37
MRC-MW69A	27.63	9.80	17.83
MRC-MW69B	27.85	-0.34	28.19
MRC-MW70A	14.69	0.83	13.86
MRC-MW70B	14.44	2.89	11.55
MRC-MW71A	16.90	1.33	15.57
MRC-MW71B	16.94	3.72	13.22
MRC-MW72A	11.12	4.93	6.19
MRC-MW72B	10.79	4.74	6.05
MRC-MW73A	10.46	5.40	5.06
MRC-MW73B	10.28	5.42	4.86
MRC-MW74A	11.18	6.02	5.16
MRC-MW74B	10.88	6.20	4.68
MRC-MW74C	11.05	7.30	3.75
MRC-MW75A	29.00	NM	--
MRC-MW76A	28.42	11.00	17.42
MRC-MW76B	28.24	10.70	17.54

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, MARCH 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Elevation Top of Well Casing Feet (NAVD 1988)	Depth to Groundwater 3/12/2013 Below Top of Casing (Feet)	Groundwater Elevation 3/12/2013 NAVD 1988 (Feet)
MRC-MW77A	23.06	6.45	16.61
MRC-MW78B	24.30	NM	--
MRC-MW79B	19.18	8.12	11.06
MRC-MW80A	32.82	5.51	27.31
MRC-MW80B	32.66	NM	--
MRC-MW81A	27.34	10.54	16.80
MRC-MW81B	25.96	7.04	18.92
MRC-MW82A	23.88	NM	--
MRC-MW83A	20.14	NM	--
MRC-MW84A	20.20	0.00	20.20
MRC-MW85A	18.66	3.15	15.51
MRC-MW86A	23.62	4.80	18.82
MRC-MW86B	23.72	4.82	18.90
MRC-MW87A	26.57	11.80	14.77
MRC-MW87B	26.54	7.42	19.12
MRC-MW87C	25.82	NM	--
MRC-MW88A	24.47	4.92	19.55
MRC-MW88B	24.40	4.38	20.02
MRC-MW89B	21.85	NM	--
MRC-MW90B	21.67	6.92	14.75
MRC-MW91A	36.85	9.25	27.60
MRC-MW91B	36.54	20.86	15.68
MRC-MW91C	36.21	NM	--
MRC-MW92C	25.31	2.86	22.45
MRC-MW93A	32.05	6.02	26.03
MRC-MW93B	31.97	11.70	20.27
MRC-MW93D	25.06	8.51	16.55
MRC-MW94B	25.28	4.25	21.03
MRC-MW94D	23.01	8.03	14.98
MRC-MW95B	24.04	3.88	20.16
MRC-MW95D	9.99	-0.32	10.31
MRC-MW96A	30.87	12.87	18.00
MRC-MW96B	30.85	15.91	14.94
MRC-MW96D	6.44	-5.34	11.78
MRC-MW98A	31.88	3.12	28.76

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, MARCH 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Well ID	Elevation Top of Well Casing Feet (NAVD 1988)	Depth to Groundwater 3/12/2013 Below Top of Casing (Feet)	Groundwater Elevation 3/12/2013 NAVD 1988 (Feet)
MRC-MW98B	31.93	9.64	22.29
MRC-MW100A	27.82	9.73	18.09
MRC-MW100B	27.80	10.19	17.61
MRC-MW101A	27.29	14.63	12.66
MRC-MW101B	27.25	12.94	14.31
MRC-MW102A	21.63	10.36	11.27
MRC-MW102B	21.58	11.81	9.77
MRC-MW103A	12.93	NM	--
MRC-MW103B	12.99	NM	--
MRC-MW104A	8.19	3.21	4.98
MRC-MW104B	8.23	4.05	4.18
MRC-MW105A	9.66	3.64	6.02
MRC-MW105B	9.64	3.83	5.81
MRC-MW106BC	16.20	0.56	15.64
MRC-MW107BC	10.33	0.03	10.30
MRC-MW109A	31.54	5.59	25.95
MRC-MW109B	31.54	16.62	14.92
MRC-MW110A	16.50	2.95	13.55
MRC-MW110B	16.50	2.50	14.00
MRC-MW111A	31.67	7.62	24.05
MRC-MW111B	31.67	13.43	18.24
MRC-MW112A	5.24	2.20	3.04
MRC-PZ01A	11.21	6.22	4.99
MRC-PZ01B	11.23	6.35	4.88
MRC-PZ02A	14.65	0.54	14.11
MRC-PZ02B	14.10	1.74	12.36

MRC = Middle River Complex
MW = monitoring well
NAVD = North American Vertical Datum
NM = not measured
A - upper surficial aquifer
B - intermediate surficial aquifer
C - lower surficial aquifer
D - deep confined aquifer for MW93D through MW96D
EXT Existing (for wells installed prior to the VCP in 2002)

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLE CHEMICAL ANALYSES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Chemical	Frequency of Detection		Minimum Concentration Not Detected	Maximum Concentration Not Detected	Minimum Concentration Detected	Maximum Concentration Detected	Sample of Maximum Detected	Mean Concentration of All Samples	Mean Concentration of Positive Detects	Standard Deviation
	Number	Percent								
VOLATILES (UG/L)										
TRICHLOROETHENE	71/120	59	0.17	0.85	0.17 J	40000	MRC-MW74B-032113	508	858	3689
CIS-1,2-DICHLOROETHENE	60/120	50	0.17	0.17	0.18 J	26000	MRC-MW-96A-032713	243	486	2373
1,1-DICHLOROETHENE	36/120	30	0.19	240	0.2 J	540	MRC-MW14B-040113	16.5	48.3	64.1
1,1-DICHLOROETHANE	32/120	27	0.15	190	0.19 J	110	MRC-MW98B-042913	4.4	10.6	15.3
BENZENE	21/120	18	0.13	160	0.13 J	560	MRC-MW-96B-032713	8.1	38.3	52.7
VINYL CHLORIDE	19/120	16	0.22	280	0.22 J	56	MRC-MW-48A-042913	4.7	14.4	17.5
ACETONE	14/108	13	1.1	970	1.1 J	1900 J	MRC-MW74B-032113	26.3	144	188
CHLOROFORM	11/120	9	0.16	200	0.19 J	4.3	MRC-MW-38A-032013	1.9	0.91	10.9
METHYL TERT-BUTYL ETHER	11/120	9	0.17	210	0.3 J	61 J	MRC-MW77A-031913	3.3	14.5	13.3
METHYLENE CHLORIDE	11/120	9	0.33	660	0.95 J	82 J	MRC-MW-60B-040213	6.9	19.7	36.1
TRANS-1,2-DICHLOROETHENE	7/120	6	0.19	240	1.2 J	7.7 J	MRC-MW-81B-040213	2.4	3.66	13.2
TETRACHLOROETHENE	6/120	5	0.29	360	0.38 J	13 J	MRC-MW-60A-040213	3.6	4.68	19.8
CARBON DISULFIDE	5/120	4	0.13	160	0.16 J	0.75 J	MRC-MW-92C-050213	1.5	0.38	8.9
ISOPROPYLBENZENE	5/120	4	0.13	160	0.35 J	9.4 J	MRC-MW-21B-042213	1.6	3.50	8.9
O-XYLENE	5/120	4	0.14	180	0.21 J	61	MRC-MW-96B-032713	2.2	13.1	11.3
TOTAL XYLENES	5/120	4	0.28	350	0.77 J	93	MRC-MW-96B-032713	4.2	22.1	20.8
M+P-XYLENES	4/120	3	0.24	300	0.36 J	32 J	MRC-MW-96B-032713	3.2	11.2	16.7
1,2,3-TRIMETHYLBENZENE	3/120	3	0.0059	7.4	0.39 J	26 J	MRC-MW-96B-032713	0.303	9.36	2.40
1,2,4-TRIMETHYLBENZENE	3/120	3	0.12	150	0.17 J	19 J	MRC-MW-96B-032713	1.58	7.19	8.38
ETHYLBENZENE	3/120	3	0.17	210	0.28 J	32	MRC-MW17A-042413	2.28	12.6	11.8
1,1,1-TRICHLOROETHANE	2/120	2	0.22	280	0.28 J	60	MRC-MW98B-042913	3.09	30.1	16.1
1,2-DICHLOROETHANE	2/120	2	0.22	280	0.77 J	1.2 J	MRC-MW-109B-040113	2.61	0.99	15.2
1,4-DICHLOROBENZENE	2/120	2	0.13	160	0.27 J	0.58 J	MRC-OF04C-050713	1.54	0.43	8.86
TRICHLOROFLUOROMETHANE	2/120	2	0.21	260	1.1	3.7	MRC-MW-02A-041013	2.48	2.4	14.2
2-BUTANONE	1/120	1	0.57	710	1.6 J	1.6 J	MRC-MW-92C-050213	6.70	1.6	38.9
CARBON TETRACHLORIDE	1/120	1	0.13	160	6.3	6.3	MRC-MW34B-032113	1.58	6.3	8.9
CHLOROBENZENE	1/120	1	0.15	190	1.8	1.8	MRC-MW-112A-042413	1.77	1.8	10.3
CHLOROETHANE	1/120	1	0.29	360	32	32	MRC-MW98B-042913	3.65	32	19.9
DICHLORODIFLUOROMETHANE	1/120	1	0.31	390	1.1	1.1	MRC-MW-02A-041013	3.68	1.1	21.4
DIISOPROPYL ETHER	1/120	1	1.5	1900	2 J	2 J	MRC-MW87A-031813	17.6	2	103
NAPHTHALENE	1/120	1	0.24	300	13 J	13 J	MRC-MW-96B-032713	2.92	13	16.5
N-BUTYLBENZENE	1/120	1	0.12	150	0.51 J	0.51 J	MRC-MW77A-031913	1.42	0.51	8.23
N-PROPYLBENZENE	1/120	1	0.14	180	3.8 J	3.8 J	MRC-MW17A-042413	1.71	3.80	9.87
SEC-BUTYLBENZENE	1/120	1	0.13	160	1.5 J	1.5 J	MRC-MW77A-031913	1.54	1.50	8.86
TERT-AMYL METHYL ETHER	1/120	1	0.067	84	0.3 J	0.3 J	MRC-MW77A-031913	0.79	0.30	4.6
TOLUENE	1/120	1	0.13	160	12	12	MRC-MW17A-042413	1.6	12	8.9
SEMIVOLATILES (UG/L)										
1,4-DIOXANE	37/77	48	0.47	4.8	0.68 J	270	MRC-MW14B-040113	11.9	24.4	39.4

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLE CHEMICAL ANALYSES, MARCH-MAY 2013[(1)]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Chemical	Frequency of Detection		Minimum Concentration Not Detected	Maximum Concentration Not Detected	Minimum Concentration Detected	Maximum Concentration Detected	Sample of Maximum Detected	Mean Concentration of All Samples	Mean Concentration of Positive Detects	Standard Deviation
	Number	Percent								
INORGANICS (UG/L)										
BARIUM	96/96	100			6.1 K	2500	MRC-MW--68A-040313	205	205	299
COBALT	94/96	98	0.8	1.5	0.72 J	8100	MRC-MW--67A-040313	289	295	862
NICKEL	93/96	97	2.4	4.4	1.9 J	14000	MRC-MW--67A-040313	432	446	1563
ZINC	91/96	95	4	16	5.3 J	21000 K	MRC-MW--67A-040313	587	619	2278
BERYLLIUM	81/96	84	0.1	0.1	0.1 J	400 K	MRC-MW--67A-040313	11.9	14.1	49.5
LEAD	75/96	78	0.2	0.2	0.21 J	41	MRC-MW-92C-050213	1.3	1.6	4.4
COPPER	71/96	74	0.5	3.7	0.51 J	1800	MRC-MW--67A-040313	34.3	46.2	185
CADMIUM	53/96	55	0.1	0.2	0.1 J	13	MRC-MW--71A-040313	0.70	1.22	1.86
VANADIUM	43/96	45	0.8	1.6	0.8 J	81 J	MRC-MW-92C-050213	2.5	5.0	8.9
SELENIUM	37/96	39	0.5	1	0.51 J	6.3 K	MRC-MW93A-032113	0.8	1.6	1.0
CHROMIUM	31/96	32	0.9	1.8	0.94 J	680 J	MRC-MW-92C-050213	8.5	25.5	69.3
ARSENIC	24/96	25	0.9	1.8	0.94 J	7.7 J	MRC-MW-92C-050213	0.9	2.18	1.06
MOLYBDENUM	19/96	20	0.2	1.4	0.21 J	12 J	MRC-MW-92C-050213	0.53	1.84	1.58
THALLIUM	13/96	14	0.2	0.4	0.2 J	1.1 J	MRC-MW--67A-040313	0.15	0.47	0.17
ANTIMONY	12/96	13	0.3	1.2	0.36 J	6.2	MRC-MW-46A-042413	0.39	1.86	0.84
SILVER	11/96	11	0.1	0.39	0.1 J	0.9 J	MRC-MW--68A-040313	0.09	0.35	0.13
MERCURY	2/97	2	0.1	0.17	0.15 J	0.17 J	MRC-MW24A-032713	0.05	0.16	0.02
MISCELLANEOUS (UG/L)										
PERCHLORATE	13/27	48	0.082	0.082	0.1 J	9.3	MRC-MW-53B-032613	0.81	1.64	1.88
NATURAL ATTENUATION PARAMETERS										
ALKALINITY (MG/L)	16/16	100			3.5 J	200	MRC-MW03A-041813	44.3	44.3	45.7
AMMONIA-N (MG/L)	8/16	50	0.038	0.3	0.041 J	3.5	MRC-MW03A-041813	0.45	0.83	0.94
CHLORIDE (MG/L)	16/16	100			7.4 K	690	MRC-MW27A-032713	164	164	197
DISSOLVED ORGANIC CARBON (MG/L)	16/16	100			0.56 J	17	MRC-MW03A-041813	2.92	2.92	3.91
NITRATE-N (MG/L)	8/16	50	0.023	0.023	0.053 J	0.95	MRC-MW37A-032613	0.18	0.35	0.27
ORTHOPHOSPHATE-P (MG/L)	2/16	13	0.044	0.044	0.34 J	0.71	MRC-MW72B-032613	0.08	0.53	0.18
SULFATE (MG/L)	16/16	100			1.1	74	MRC-MW14B-040113	14.7	14.7	22.0
TOTAL DISSOLVED SOLIDS (MG/L)	16/16	100			15	1000	MRC-MW27A-032713	335	335	295
METHANE (UG/L)	14/16	88	0.12	0.14	0.35 J	4800	MRC-MW-48A-042913	510	583	1232
ETHANE (UG/L)	5/16	31	0.1	0.1	0.22 J	31	MRC-MW-48A-042913	2.22	6.99	7.71
ETHENE (UG/L)	4/16	25	0.37	0.37	1.3	13	MRC-MW-48A-042913	1.65	6.03	3.61
CALCIUM (UG/L)	16/16	100			1100 J	110000	MRC-MW-81B-040213	22031	22031	27013
IRON (UG/L)	16/16	100			110 J	94000	MRC-MW27A-032713	18281	18281	24375
MAGNESIUM (UG/L)	16/16	100			900 J	24000	MRC-MW27A-032713	8744	8744	6796
MANGANESE (UG/L)	16/16	100			33	32000	MRC-MW27A-032713	4466	4466	8514
POTASSIUM (UG/L)	16/16	100			420 J	7100	MRC-MW27B-032713	3445	3445	1781
SILICON DIOXIDE (UG/L)	16/16	100			5700	21000	MRC-MW14B-040113	10956	10956	4251
SODIUM (UG/L)	16/16	100			9200	260000	MRC-MW27A-032713	63231	63231	74089

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLE CHEMICAL ANALYSES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Chemical	Frequency of Detection		Minimum Concentration Not Detected	Maximum Concentration Not Detected	Minimum Concentration Detected	Maximum Concentration Detected	Sample of Maximum Detected	Mean Concentration of All Samples	Mean Concentration of Positive Detects	Standard Deviation
	Number	Percent								
TENTATIVELY IDENTIFIED COMPOUNDS (TICs) - VOLATILES (UG/L)										
1,3,5-TRIMETHYLBENZENE	1/1	100			8.4 NJ	8.4 NJ	MRC-MW-96B-032713	8.4	8.4	[2]
1H-INDENE, 2,3-DIHYDRO-1,2-DIMETHYL-	1/1	100			2.3 NJ	2.3 NJ	MRC-MW77A-031913	2.3	2.3	[2]
1-PENTENE	1/1	100			6.6 NJ	6.6 NJ	MRC-MW27A-032713	6.6	6.6	[2]
2-BUTENE, 2-METHYL-	1/1	100			15 NJ	15 NJ	MRC-MW17A-042413	15	15	[2]
2-NITROPROPANE	1/1	100			3.6 NJ	3.6 NJ	MRC-MW-109B-040113	3.6	3.6	[2]
BENZENE, 1,2,3,5-TETRAMETHYL-	1/1	100			3.5 NJ	3.5 NJ	MRC-MW-109B-040113	3.5	3.5	[2]
BENZENE, 1-ETHYL-2-METHYL-	1/1	100			28 NJ	28 NJ	MRC-MW-96B-032713	28	28	[2]
BENZENE, 2-ETHENYL-1,4-DIMETHYL-	1/1	100			2 NJ	2 NJ	MRC-MW77A-031913	2	2	[2]
BUTANE	3/3	100			1.3 NJ	160 NJ	MRC-MW17A-042413	64.1	64.1	84
BUTANE, 2,2-DIMETHYL-	3/3	100			4.7 NJ	48 NJ	MRC-MW-96B-032713	24.9	24.9	22
BUTANE, 2,3-DIMETHYL-	1/1	100			1.1 NJ	1.1 NJ	MRC-MW-50A-042413	1.1	1.1	[2]
BUTANE, 2-METHYL-	10/10	100			1.1 NJ	330 NJ	MRC-MW-96B-032713	70	70	114
CYCLOHEXANE	8/8	100			0.12 NJ	22 NJ	MRC-MW17A-042413	4.28	4.28	7.65
CYCLOHEXENE	1/1	100			17 NJ	17 NJ	MRC-MW17A-042413	17	17	[2]
CYCLOPENTANE	2/2	100			2.4 NJ	3.4 NJ	MRC-MW77A-031913	2.9	2.9	0.71
CYCLOPENTANE, METHYL-	1/1	100			1.7 NJ	1.7 NJ	MRC-MW102A-032013	1.7	1.7	
DICHLOROFLUOROMETHANE	2/2	100			0.76 J	1.6 NJ	MRC-MW-19A-040513	1.18	1.18	0.59
DIMETHYL ETHER	7/7	100			1.1 NJ	10 NJ	MRC-MW27C-032713	3.4	3.4	3.1
ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-	2/2	100			1.6 NJ	1.8 NJ	MRC-MW101A-032013	1.7	1.7	0.14
FORMAMIDE, N-METHYLTHIO	2/2	100			1.1 NJ	1.3 NJ	MRC-MW104A-032113	1.2	1.2	0.14
HEXANE	1/1	100			14 NJ	14 NJ	MRC-MW-96B-032713	14	14	[2]
HEXANE, 3-METHYL-	1/1	100			12 NJ	12 NJ	MRC-MW17A-042413	12	12	[2]
INDAN, 1-METHYL-	1/1	100			2.6 NJ	2.6 NJ	MRC-MW77A-031913	2.6	2.6	[2]
INDANE	3/3	100			1.3 NJ	24 NJ	MRC-MW17A-042413	11.5	11.5	11.5
ISOBUTANE	1/1	100			32 NJ	32 NJ	MRC-MW17A-042413	32	32	[2]
METHYLCYCLOHEXANE	2/2	100			0.47 J	0.57 NJ	MRC-MW102A-032013	0.52	0.52	0.07
PENTANE	3/3	100			4.6 NJ	98 NJ	MRC-MW-96B-032713	39.2	39.2	51.2
PENTANE, 3-METHYL-	2/2	100			30 NJ	50 NJ	MRC-MW-96B-032713	40	40	14.1
SILANOL, TRIMETHYL-	2/2	100			1.1 NJ	1.4 NJ	MRC-MW76B-031813	1.3	1.3	0.2
TERTIARY-BUTYL ALCOHOL	2/4	50	3.9	9.8	4.5 J	5.9 J	MRC-MW29A-032613	4.3	5.2	1.7
TETRAHYDROFURAN	1/1	100			0.64 NJ	0.64 NJ	MRC-MW-110A-032613	0.64	0.64	[2]

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLE CHEMICAL ANALYSES, MARCH-MAY 2013[(1)]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 4 OF 4

1 Polychlorinated biphenyls (PCBs) were analyzed for six groundwater samples, but the results are not shown because PCBs were not detected in the samples. Results are in Appendix E.
2 - There are an insufficient number of samples to calculate this statistic.
For non-detects, 1/2 sample quantitation limit was used as a proxy concentration.
1/2 the detection limit was used for B qualified data.
J - Positive result is considered estimated as a result of technical noncompliance.
K - Positive result is considered to be biased high as a result of technical noncompliance. Result is expected to be lower.
L - Positive result is considered to be biased low as a result of technical noncompliance. Result is expected to be higher.
MG/L = milligrams per liter (i.e., parts per million)
NJ - positive result indicates presumptive evidence of a compound; the compound is tentatively identified and the concentration is estimated.
UG/L - micrograms per liter (i.e., parts per billion)

Associated Samples

MRC-EXT04-040813	MRC-MW12C-040213	MRC-MW43A-031813	MRC-MW75A-042313	MRC-OF04A-050713
MRC-EXT06-040813	MRC-MW13A-040213	MRC-MW44A-031813	MRC-MW76A-031813	MRC-OF04B-050713
MRC-MW-01A-041013	MRC-MW14A-040113	MRC-MW-46A-042413	MRC-MW76B-031813	MRC-OF04B-050713
MRC-MW-02A-041013	MRC-MW14B-040113	MRC-MW-48A-042913	MRC-MW77A-031913	MRC-OF04C-050713
MRC-MW03A-041813	MRC-MW14C-040213	MRC-MW-49A-042413	MRC-MW78B-031813	MRC-OF-05A-050213
MRC-MW04A-041813	MRC-MW-15A-040913	MRC-MW-50A-042413	MRC-MW79B-032013	MRC-OF-05B-050213
MRC-MW-05A-041013	MRC-MW-16A-040913	MRC-MW51A-040513	MRC-MW-80A-040813	MRC-OF-05C-050213
MRC-MW-06A-042513	MRC-MW17A-042413	MRC-MW52A-040513	MRC-MW-80B-040813	MRC-OF-06A-050113
MRC-MW-07A-042513	MRC-MW-18A-040513	MRC-MW-53A-032613	MRC-MW-81A-040213	MRC-OF-06B-050113
MRC-MW08A-040513	MRC-MW-19A-040513	MRC-MW-53B-032613	MRC-MW-81B-040213	MRC-OF-06C-050113
MRC-MW08B-040513	MRC-MW-20A-040513	MRC-MW-54A-040913	MRC-MW86A-031513	MRC-OF07-043013
MRC-MW100A-043013	MRC-MW-21A-042213	MRC-MW-56A-050813	MRC-MW86B-031513	MRC-OF08A-050113
MRC-MW100B-043013	MRC-MW-21B-042213	MRC-MW-57A-042313	MRC-MW87A-031813	MRC-OF08B-050113
MRC-MW101A-032013	MRC-MW-22A-042213	MRC-MW-58A-042313	MRC-MW87B-031513	MRC-OF08C-050113
MRC-MW101B-032013	MRC-MW-22B-042313	MRC-MW-59A-042313	MRC-MW88B-031913	MRC-OF08D-050113
MRC-MW102A-032013	MRC-MW24A-032713	MRC-MW-60A-040213	MRC-MW90B-042313	
MRC-MW102B-032013	MRC-MW25A-042213	MRC-MW-60B-040213	MRC-MW91A-042313	
MRC-MW103A-032713	MRC-MW26A-032613	MRC-MW61A-042213	MRC-MW-92C-050213	
MRC-MW103B-032713	MRC-MW27A-032713	MRC-MW62A-031813	MRC-MW93A-032113	
MRC-MW104A-032113	MRC-MW27B-032713	MRC-MW62C-031813	MRC-MW-93D-043013	
MRC-MW104B-032113	MRC-MW27C-032713	MRC-MW63A-040313	MRC-MW-94B-032013	
MRC-MW-105A-032013	MRC-MW29A-032613	MRC-MW-64A-042513	MRC-MW-94D-043013	
MRC-MW106B/C-040113	MRC-MW30A-031513	MRC-MW-66A-042513	MRC-MW95B-031913	
MRC-MW107B/C-040113	MRC-MW31A-031513	MRC-MW--67A-040313	MRC-OF-95D-050113	
MRC-MW-109A-040513	MRC-MW32A-031513	MRC-MW--68A-040313	MRC-MW-96A-032713	
MRC-MW-109B-040113	MRC-MW33A-031513	MRC-MW-69A-040113	MRC-MW-96B-032713	
MRC-MW10A-042413	MRC-MW34A-031513	MRC-MW-69B-040113	MRC-MW-96D-050613	
MRC-MW-110A-032613	MRC-MW34B-032113	MRC-MW70A-040313	MRC-MW98A-042913	
MRC-MW-110B-032613	MRC-MW34C-032113	MRC-MW70B-040313	MRC-MW98B-042913	
MRC-MW-111A-042913	MRC-MW37A-032613	MRC-MW--71A-040313	MRC-OF-01-050813	
MRC-MW-111B-042913	MRC-MW37B-032113	MRC-MW--71B-040313	MRC-OF-02A-050613	
MRC-MW-112A-042413	MRC-MW37C-032113	MRC-MW72B-032613	MRC-OF-02B-050613	
MRC-MW-11A-040913	MRC-MW-38A-032013	MRC-MW73B-031913	MRC-OF-02C-050613	
MRC-MW11C-042413	MRC-MW-38B-032013	MRC-MW74A-032113	MRC-OF-03A-050713	
MRC-MW12A-040213	MRC-MW41A-042913	MRC-MW74B-032113	MRC-OF-03B-050713	
MRC-MW12B-040313	MRC-MW42A-041813	MRC-MW74C-031913	MRC-OF-03C-050713	

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW01A MRC-MW-01A-041013 4/10/2013	MRC-MW02A MRC-MW-02A-041013 4/10/2013	MRC-MW03A MRC-MW03A-041813 4/18/2013	MRC-MW04A MRC-MW04A-041813 4/18/2013	EXT-MW04 MRC-EXT04-040813 4/8/2013	MRC-MW05A MRC-MW-05A-041013 4/10/2013	MRC-MW06A MRC-MW-06A-042513 4/25/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	NA	--	NA	NA	NA	NA	NA
1,1-DICHLOROETHANE	90	NA	--	NA	NA	NA	NA	NA
1,1-DICHLOROETHENE	7	NA	--	NA	NA	NA	NA	NA
1,2,3-TRIMETHYLBENZENE	NA	NA	--	NA	NA	NA	NA	NA
1,2,4-TRIMETHYLBENZENE	NA	NA	--	NA	NA	NA	NA	NA
1,2-DICHLOROETHANE	5	NA	--	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	75	NA	--	NA	NA	NA	NA	NA
2-BUTANONE	700	NA	--	NA	NA	NA	NA	NA
ACETONE	550	NA	--	NA	NA	NA	NA	NA
BENZENE	5	NA	--	NA	NA	NA	NA	NA
CARBON DISULFIDE	100	NA	--	NA	NA	NA	NA	NA
CARBON TETRACHLORIDE	5	NA	--	NA	NA	NA	NA	NA
CHLOROBENZENE	100	NA	--	NA	NA	NA	NA	NA
CHLOROETHANE	3.6	NA	--	NA	NA	NA	NA	NA
CHLOROFORM	80	NA	--	NA	NA	NA	NA	NA
CIS-1,2-DICHLOROETHENE	70	NA	--	NA	NA	NA	NA	NA
DICHLORODIFLUOROMETHANE	NA	NA	1.1	NA	NA	NA	NA	NA
DIISOPROPYL ETHER	NA	NA	--	NA	NA	NA	NA	NA
ETHYLBENZENE	700	NA	--	NA	NA	NA	NA	NA
ISOPROPYLBENZENE	66	NA	--	NA	NA	NA	NA	NA
M+P-XYLENES	10000	NA	--	NA	NA	NA	NA	NA
METHYL TERT-BUTYL ETHER	20	NA	--	NA	NA	NA	NA	NA
METHYLENE CHLORIDE	5	NA	--	NA	NA	NA	NA	NA
NAPHTHALENE	0.65	NA	--	NA	NA	NA	NA	NA
N-BUTYLBENZENE	NA	NA	--	NA	NA	NA	NA	NA
N-PROPYLBENZENE	NA	NA	--	NA	NA	NA	NA	NA
O-XYLENE	10000	NA	--	NA	NA	NA	NA	NA
SEC-BUTYLBENZENE	NA	NA	--	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	--	NA	NA	NA	NA	NA
TERTIARY-BUTYL ALCOHOL	NA	NA	--	NA	NA	NA	NA	NA
TETRACHLOROETHENE	5	NA	--	NA	NA	NA	NA	NA
TOLUENE	1000	NA	--	NA	NA	NA	NA	NA
TOTAL XYLENES	10000	NA	--	NA	NA	NA	NA	NA
TRANS-1,2-DICHLOROETHENE	100	NA	--	NA	NA	NA	NA	NA
TRICHLOROETHENE	5	NA	--	NA	NA	NA	NA	NA
TRICHLOROFLUOROMETHANE	NA	NA	3.7	NA	NA	NA	NA	NA
VINYL CHLORIDE	2	NA	--	NA	NA	NA	NA	NA
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	NA	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	0.17 J	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW01A MRC-MW-01A-041013 4/10/2013	MRC-MW02A MRC-MW-02A-041013 4/10/2013	MRC-MW03A MRC-MW03A-041813 4/18/2013	MRC-MW04A MRC-MW04A-041813 4/18/2013	EXT-MW04 MRC-EXT04-040813 4/8/2013	MRC-MW05A MRC-MW-05A-041013 4/10/2013	MRC-MW06A MRC-MW-06A-042513 4/25/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	--	--	--	--	--
ARSENIC	10	1.1 J	--	3.8 J	--	--	1 J	--
BARIUM	2000	38	110	68	170	69	290	800
BERYLLIUM	4	--	5 K	--	1.1 L	--	13 K	32
CADMIUM	5	--	0.23 J	--	1.9	--	0.69 J	2.9
CHROMIUM	100	--	--	--	--	1.3 J	--	16
COBALT	NA	0.72 J	75	6.5	380	4.8	220	960
COPPER	1300	8.2	58	11	14	2.4 L	12	38
LEAD	15	0.52 J	0.4 J	1.4	0.61 J	0.29 J	1.1	1.1 J
MANGANESE	50	NA	NA	240	NA	NA	NA	NA
MERCURY	2	--	--	--	--	--	--	--
MOLYBDENUM	NA	--	--	--	--	1.2 J	--	1.5 J
NICKEL	73	4.2	110	32	480	--	330	1600
POTASSIUM	NA	NA	NA	3600 J	NA	NA	NA	NA
SELENIUM	50	--	--	--	--	--	--	--
SILVER	100	--	--	--	--	--	--	0.41 J
THALLIUM	2	--	--	--	--	--	0.23 J	0.88 J
VANADIUM	3.7	3.1 J	1.9 J	3.7 J	0.83 J	1 J	1.1 J	--
ZINC	5000	5.3 J	93	120 K	390 K	5.5 J	500	1700
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	200	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	3.5	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	120	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	17	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	0.16 K	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	--	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	11	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	370	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	49000	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	20000	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	16000	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	5800 K	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	64000	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	--	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	--	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	880	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	EXT-MW06 MRC-EXT06-040813 4/8/2013	MRC-MW07A MRC-MW-07A-042513 4/25/2013	MRC-MW08A MRC-MW08A-040513 4/5/2013	MRC-MW08B MRC-MW08B-040513 4/5/2013	MRC-MW10A MRC-MW10A-042413 4/24/2013	MRC-MW11A MRC-MW-11A-040913 4/9/2013	MRC-MW11C MRC-MW11C-042413 4/24/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	NA	NA	--	--	--	--	--
1,1-DICHLOROETHANE	90	NA	NA	--	--	0.22 J	5.1	--
1,1-DICHLOROETHENE	7	NA	NA	--	--	0.39 J	27	--
1,2,3-TRIMETHYLBENZENE	NA	NA	NA	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	NA	NA	--	--	--	--	--
1,2-DICHLOROETHANE	5	NA	NA	--	--	--	--	--
1,4-DICHLOROBENZENE	75	NA	NA	--	--	--	--	--
2-BUTANONE	700	NA	NA	--	--	--	--	--
ACETONE	550	NA	NA	1.2 J	--	--	--	--
BENZENE	5	NA	NA	--	--	--	--	--
CARBON DISULFIDE	100	NA	NA	--	--	--	--	--
CARBON TETRACHLORIDE	5	NA	NA	--	--	--	--	--
CHLOROBENZENE	100	NA	NA	--	--	--	--	--
CHLOROETHANE	3.6	NA	NA	--	--	--	--	--
CHLOROFORM	80	NA	NA	--	0.19 J	--	--	--
CIS-1,2-DICHLOROETHENE	70	NA	NA	--	--	0.53 J	5.9	--
DICHLORODIFLUOROMETHANE	NA	NA	NA	--	--	--	--	--
DIISOPROPYL ETHER	NA	NA	NA	--	--	--	--	--
ETHYLBENZENE	700	NA	NA	--	--	--	--	--
ISOPROPYLBENZENE	66	NA	NA	--	--	--	--	--
M+P-XYLENES	10000	NA	NA	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	NA	NA	--	--	--	--	--
METHYLENE CHLORIDE	5	NA	NA	--	--	--	--	--
NAPHTHALENE	0.65	NA	NA	--	--	--	--	--
N-BUTYLBENZENE	NA	NA	NA	--	--	--	--	--
N-PROPYLBENZENE	NA	NA	NA	--	--	--	--	--
O-XYLENE	10000	NA	NA	--	--	--	--	--
SEC-BUTYLBENZENE	NA	NA	NA	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	NA	NA	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	NA	NA	--	--	--	--	--
TETRACHLOROETHENE	5	NA	NA	--	--	--	--	--
TOLUENE	1000	NA	NA	--	--	--	--	--
TOTAL XYLENES	10000	NA	NA	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	NA	NA	--	--	--	--	--
TRICHLOROETHENE	5	NA	NA	--	1.6	--	6.3	--
TRICHLOROFLUOROMETHANE	NA	NA	NA	--	--	--	--	--
VINYL CHLORIDE	2	NA	NA	--	--	--	1.5	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	1.6	4.9	--	--	1.2	4.7	--
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	--	2.1	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	EXT-MW06 MRC-EXT06-040813 4/8/2013	MRC-MW07A MRC-MW-07A-042513 4/25/2013	MRC-MW08A MRC-MW08A-040513 4/5/2013	MRC-MW08B MRC-MW08B-040513 4/5/2013	MRC-MW10A MRC-MW10A-042413 4/24/2013	MRC-MW11A MRC-MW-11A-040913 4/9/2013	MRC-MW11C MRC-MW11C-042413 4/24/2013
Total metals (µg/L)								
ANTIMONY	6	NA	--	--	NA	--	--	NA
ARSENIC	10	NA	--	1.8 J	NA	2.7 J	0.94 J	NA
BARIUM	2000	NA	65	170	NA	93	41	NA
BERYLLIUM	4	NA	1.6	1.8	NA	0.12 J	--	NA
CADMIUM	5	NA	1.1	--	NA	--	0.36 J	NA
CHROMIUM	100	NA	1.6 J	--	NA	--	--	NA
COBALT	NA	NA	220	89	NA	82	50	NA
COPPER	1300	NA	57	2.3	NA	1.6 J	--	NA
LEAD	15	NA	4.9	0.93 J	NA	0.63 J	0.5 J	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	--	--	NA	--	--	NA
MOLYBDENUM	NA	NA	--	0.5 J	NA	--	--	NA
NICKEL	73	NA	410	180	NA	23	13	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	1.3 J	--	NA	--	--	NA
SILVER	100	NA	--	--	NA	--	--	NA
THALLIUM	2	NA	--	--	NA	--	0.2 J	NA
VANADIUM	3.7	NA	--	--	NA	2 J	1.6 J	NA
ZINC	5000	NA	120	66 K	NA	65	250	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW12A MRC-MW12A-040213 4/2/2013	MRC-MW12B MRC-MW12B-040313 4/3/2013	MRC-MW12C MRC-MW12C-040213 4/2/2013	MRC-MW13A MRC-MW13A-040213 4/2/2013	MRC-MW14A MRC-MW14A-040113 4/1/2013	MRC-MW14B MRC-MW14B-040113 4/1/2013	MRC-MW14C MRC-MW14C-040213 4/2/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	90	25 J	3.1 J	--	--	0.32 J	45 J	--
1,1-DICHLOROETHENE	7	310	25	--	--	0.35 J	540	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--
ACETONE	550	--	11 J	--	--	--	--	--
BENZENE	5	--	3 J	--	--	--	36 J	--
CARBON DISULFIDE	100	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	--	--
CHLOROFORM	80	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	110	18	--	0.18 J	1.9	54 J	--
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	--	--
METHYLENE CHLORIDE	5	32 J	5.4 J	--	--	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--
O-XYLENE	10000	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--	--	--
TRICHLOROETHENE	5	1500	240	0.17 J	--	1.1	2300	--
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--
VINYL CHLORIDE	2	--	--	--	--	--	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	170	24	--	--	--	270	--
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW12A MRC-MW12A-040213 4/2/2013	MRC-MW12B MRC-MW12B-040313 4/3/2013	MRC-MW12C MRC-MW12C-040213 4/2/2013	MRC-MW13A MRC-MW13A-040213 4/2/2013	MRC-MW14A MRC-MW14A-040113 4/1/2013	MRC-MW14B MRC-MW14B-040113 4/1/2013	MRC-MW14C MRC-MW14C-040213 4/2/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	NA	NA	0.38 J	--	--
ARSENIC	10	--	--	NA	NA	--	--	--
BARIUM	2000	69	76	NA	NA	55 J	130 J	59
BERYLLIUM	4	0.57 J	0.23 J	NA	NA	--	0.4 J	--
CADMIUM	5	--	--	NA	NA	0.1 J	--	--
CHROMIUM	100	--	--	NA	NA	--	--	--
COBALT	NA	44	8.1	NA	NA	17	77	5.5
COPPER	1300	--	1.7 J	NA	NA	1.1 J	3.5 J	--
LEAD	15	0.48 J	0.28 J	NA	NA	0.26 J	2	0.27 J
MANGANESE	50	1900	360	NA	NA	NA	2100	NA
MERCURY	2	--	--	NA	NA	--	--	--
MOLYBDENUM	NA	--	--	NA	NA	0.23 J	0.79 J	--
NICKEL	73	78	23	NA	NA	19	130	7.3
POTASSIUM	NA	1900 J	3600 J	NA	NA	NA	3800 J	NA
SELENIUM	50	--	--	NA	NA	4.3 J	--	--
SILVER	100	--	--	NA	NA	0.24 J	0.58 J	--
THALLIUM	2	--	--	NA	NA	--	--	--
VANADIUM	3.7	--	--	NA	NA	--	3.9 J	0.93 J
ZINC	5000	150	41 K	NA	NA	17 J	180	--
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	14	51 J	NA	NA	NA	16	NA
AMMONIA-N (mg/L)	NA	0.069 J	--	NA	NA	NA	0.32	NA
CHLORIDE (mg/L)	NA	47	7.4 K	NA	NA	NA	120	NA
DISSOLVED ORGANIC CARBON	NA	1.7	0.56 J	NA	NA	NA	2.1	NA
NITRATE-N (mg/L)	NA	--	0.053 J	NA	NA	NA	--	NA
ORTHOPHOSPHATE-P (mg/L)	NA	0.34 J	--	NA	NA	NA	--	NA
SULFATE (mg/L)	NA	1.6	3.8 K	NA	NA	NA	74	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	120	87	NA	NA	NA	330	NA
CALCIUM (µg/L)	NA	7200	9000	NA	NA	NA	19000	NA
IRON (µg/L)	300	33000	7100	NA	NA	NA	37000	NA
MAGNESIUM (µg/L)	NA	5800	4600 J	NA	NA	NA	8100	NA
SILICON DIOXIDE (µg/L)	NA	16000	9800	NA	NA	NA	21000	NA
SODIUM (µg/L)	NA	9900	9200	NA	NA	NA	43000	NA
ETHANE (µg/L)	NA	--	--	NA	NA	NA	--	NA
ETHENE (µg/L)	NA	1.3	--	NA	NA	NA	--	NA
METHANE (µg/L)	NA	53	0.77	NA	NA	NA	35	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW15A MRC-MW-15A-040913 4/9/2013	MRC-MW16A MRC-MW-16A-040913 4/9/2013	MRC-MW17A MRC-MW17A-042413 4/24/2013	MRC-MW18A MRC-MW-18A-040513 4/5/2013	MRC-MW19A MRC-MW-19A-040513 4/5/2013	MRC-MW20A MRC-MW-20A-040513 4/5/2013	MRC-MW21A MRC-MW-21A-042213 4/22/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	NA	--	--	NA	--	NA	--
1,1-DICHLOROETHANE	90	NA	27	--	NA	2.8	NA	4.6
1,1-DICHLOROETHENE	7	NA	70	--	NA	--	NA	5.9
1,2,3-TRIMETHYLBENZENE	NA	NA	--	1.7 J	NA	--	NA	--
1,2,4-TRIMETHYLBENZENE	NA	NA	--	2.4 J	NA	--	NA	--
1,2-DICHLOROETHANE	5	NA	--	--	NA	--	NA	--
1,4-DICHLOROBENZENE	75	NA	--	--	NA	--	NA	--
2-BUTANONE	700	NA	--	--	NA	--	NA	--
ACETONE	550	NA	4.7 J	--	NA	--	NA	1.1 J
BENZENE	5	NA	--	110	NA	--	NA	--
CARBON DISULFIDE	100	NA	--	--	NA	--	NA	--
CARBON TETRACHLORIDE	5	NA	--	--	NA	--	NA	--
CHLOROBENZENE	100	NA	--	--	NA	--	NA	--
CHLOROETHANE	3.6	NA	--	--	NA	--	NA	--
CHLOROFORM	80	NA	--	--	NA	0.68 J	NA	--
CIS-1,2-DICHLOROETHENE	70	NA	10	1.8 J	NA	--	NA	0.55 J
DICHLORODIFLUOROMETHANE	NA	NA	--	--	NA	--	NA	--
DIISOPROPYL ETHER	NA	NA	--	--	NA	--	NA	--
ETHYLBENZENE	700	NA	--	32	NA	--	NA	--
ISOPROPYLBENZENE	66	NA	--	1.8 J	NA	--	NA	--
M+P-XYLENES	10000	NA	--	12 J	NA	--	NA	--
METHYL TERT-BUTYL ETHER	20	NA	--	--	NA	--	NA	--
METHYLENE CHLORIDE	5	NA	--	--	NA	--	NA	--
NAPHTHALENE	0.65	NA	--	--	NA	--	NA	--
N-BUTYLBENZENE	NA	NA	--	--	NA	--	NA	--
N-PROPYLBENZENE	NA	NA	--	3.8 J	NA	--	NA	--
O-XYLENE	10000	NA	--	2 J	NA	--	NA	--
SEC-BUTYLBENZENE	NA	NA	--	--	NA	--	NA	--
TERT-AMYL METHYL ETHER	NA	NA	--	--	NA	--	NA	--
TERTIARY-BUTYL ALCOHOL	NA	NA	--	--	NA	--	NA	--
TETRACHLOROETHENE	5	NA	7.1	--	NA	--	NA	0.5 J
TOLUENE	1000	NA	--	12	NA	--	NA	--
TOTAL XYLENES	10000	NA	--	14	NA	--	NA	--
TRANS-1,2-DICHLOROETHENE	100	NA	--	--	NA	--	NA	--
TRICHLOROETHENE	5	NA	21	9	NA	--	NA	5.3
TRICHLOROFLUOROMETHANE	NA	NA	--	--	NA	1.1	NA	--
VINYL CHLORIDE	2	NA	5.9	--	NA	--	NA	0.79 J
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	11	30	2.1	5.2	6.6	2.4	2.7
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	--	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW15A MRC-MW-15A-040913 4/9/2013	MRC-MW16A MRC-MW-16A-040913 4/9/2013	MRC-MW17A MRC-MW17A-042413 4/24/2013	MRC-MW18A MRC-MW-18A-040513 4/5/2013	MRC-MW19A MRC-MW-19A-040513 4/5/2013	MRC-MW20A MRC-MW-20A-040513 4/5/2013	MRC-MW21A MRC-MW-21A-042213 4/22/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	--	--	--	--	--
ARSENIC	10	--	--	1.5 J	--	--	--	2.3 J
BARIUM	2000	170	230	370	350	36	42	64
BERYLLIUM	4	--	7.6	0.51 J	6.4	2.6	0.45 J	0.7 J
CADMIUM	5	0.14 J	1.7	--	0.68 J	1.5	--	--
CHROMIUM	100	--	1.4 J	--	--	--	0.98 J	2.9 J
COBALT	NA	35	260	49	130	730	48	7.1
COPPER	1300	--	7.2	0.96 J	36	200	8.7	3.5 J
LEAD	15	0.23 J	0.92 J	0.28 J	0.59 J	0.6 J	1.3	1.3 J
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	--	--	--	--	--
MOLYBDENUM	NA	--	--	--	--	--	--	--
NICKEL	73	6.1	290	52	220	1100	77	6.4
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	--	--	0.51 J	0.63 J	0.53 J	--
SILVER	100	--	0.12 J	--	--	--	--	--
THALLIUM	2	--	--	--	--	--	--	--
VANADIUM	3.7	--	3.1 J	--	--	--	--	4.8 J
ZINC	5000	6.9 J	500	30 K	200 K	610 K	37 K	38 J
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW21B MRC-MW-21B-042213 4/22/2013	MRC-MW22A MRC-MW-22A-042213 4/22/2013	MRC-MW22B MRC-MW-22B-042313 4/23/2013	MRC-MW24A MRC-MW24A-032713 3/27/2013	MRC-MW25A MRC-MW25A-042213 4/22/2013	MRC-MW26A MRC-MW26A-032613 3/26/2013	MRC-MW27A MRC-MW27A-032713 3/27/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	NA	--	NA	--
1,1-DICHLOROETHANE	90	10 J	--	1.1	NA	--	NA	2.1 J
1,1-DICHLOROETHENE	7	120	--	3.4	NA	--	NA	2.2 J
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	NA	--	NA	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	NA	--	NA	--
1,2-DICHLOROETHANE	5	--	--	--	NA	--	NA	--
1,4-DICHLOROBENZENE	75	--	--	--	NA	--	NA	--
2-BUTANONE	700	--	--	--	NA	--	NA	--
ACETONE	550	--	--	--	NA	--	NA	--
BENZENE	5	23	--	--	NA	1.3 J	NA	--
CARBON DISULFIDE	100	--	--	0.17 J	NA	--	NA	--
CARBON TETRACHLORIDE	5	--	--	--	NA	--	NA	--
CHLOROBENZENE	100	--	--	--	NA	--	NA	--
CHLOROETHANE	3.6	--	--	--	NA	--	NA	--
CHLOROFORM	80	--	--	--	NA	--	NA	--
CIS-1,2-DICHLOROETHENE	70	5.3 J	--	0.19 J	NA	9.9	NA	43
DICHLORODIFLUOROMETHANE	NA	--	--	--	NA	--	NA	--
DIISOPROPYL ETHER	NA	--	--	--	NA	--	NA	--
ETHYLBENZENE	700	--	--	--	NA	--	NA	--
ISOPROPYLBENZENE	66	9.4 J	--	--	NA	--	NA	--
M+P-XYLENES	10000	--	--	--	NA	--	NA	--
METHYL TERT-BUTYL ETHER	20	--	--	--	NA	--	NA	22
METHYLENE CHLORIDE	5	--	--	--	NA	--	NA	--
NAPHTHALENE	0.65	--	--	--	NA	--	NA	--
N-BUTYLBENZENE	NA	--	--	--	NA	--	NA	--
N-PROPYLBENZENE	NA	--	--	--	NA	--	NA	--
O-XYLENE	10000	--	--	--	NA	--	NA	--
SEC-BUTYLBENZENE	NA	--	--	--	NA	--	NA	--
TERT-AMYL METHYL ETHER	NA	--	--	--	NA	--	NA	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	NA	--	NA	--
TETRACHLOROETHENE	5	--	--	--	NA	--	NA	--
TOLUENE	1000	--	--	--	NA	--	NA	--
TOTAL XYLENES	10000	--	--	--	NA	--	NA	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	NA	--	NA	--
TRICHLOROETHENE	5	660	0.59 J	1.3	NA	230	NA	170
TRICHLOROFLUOROMETHANE	NA	--	--	--	NA	--	NA	--
VINYL CHLORIDE	2	--	--	--	NA	--	NA	18
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	34	--	4.2	NA	1.5	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW21B MRC-MW-21B-042213 4/22/2013	MRC-MW22A MRC-MW-22A-042213 4/22/2013	MRC-MW22B MRC-MW-22B-042313 4/23/2013	MRC-MW24A MRC-MW24A-032713 3/27/2013	MRC-MW25A MRC-MW25A-042213 4/22/2013	MRC-MW26A MRC-MW26A-032613 3/26/2013	MRC-MW27A MRC-MW27A-032713 3/27/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	--	--	--	--	--
ARSENIC	10	--	--	--	--	--	--	3.7 J
BARIUM	2000	110	42	130	220	180	340	540
BERYLLIUM	4	1.2	0.1 J	--	22	2.9	14	3.3
CADMIUM	5	--	--	--	1.2	0.13 J	0.24 J	--
CHROMIUM	100	--	--	--	--	--	1.1 J	2.4
COBALT	NA	70	32	95	120	93	320	560
COPPER	1300	--	--	--	39	--	4 L	2.4 L
LEAD	15	--	--	--	0.56 J	0.3 J	0.29 J	0.79 J
MANGANESE	50	3100	NA	NA	16000	3200	NA	32000
MERCURY	2	--	--	--	0.17 J	--	--	--
MOLYBDENUM	NA	--	--	--	--	--	--	--
NICKEL	73	81	59	160	350	130	160 L	240
POTASSIUM	NA	2600 J	NA	NA	5400	2600 J	NA	2900 J
SELENIUM	50	--	--	--	1.3 J	--	1.4 J	--
SILVER	100	--	--	--	--	--	--	--
THALLIUM	2	--	--	--	--	--	--	--
VANADIUM	3.7	--	--	--	2.2 J	0.8 J	--	2.8 J
ZINC	5000	160 K	66 K	260	330 K	130 K	230	250 K
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	36	NA	NA	38	61	NA	38
AMMONIA-N (mg/L)	NA	0.084 J	NA	NA	--	0.047 J	NA	1.9
CHLORIDE (mg/L)	NA	70 J	NA	NA	510	140 J	NA	690
DISSOLVED ORGANIC CARBON	NA	0.67 J	NA	NA	3.5	1.5	NA	2.6
NITRATE-N (mg/L)	NA	--	NA	NA	0.11	--	NA	--
ORTHOPHOSPHATE-P (mg/L)	NA	--	NA	NA	--	--	NA	--
SULFATE (mg/L)	NA	1.9 J	NA	NA	2.9	2.4 J	NA	3.1
TOTAL DISSOLVED SOLIDS (mg/L)	NA	170	NA	NA	950	270	NA	1000
CALCIUM (µg/L)	NA	6600	NA	NA	17000	23000	NA	13000
IRON (µg/L)	300	31000	NA	NA	420	18000	NA	94000
MAGNESIUM (µg/L)	NA	6700	NA	NA	22000	6300	NA	24000
SILICON DIOXIDE (µg/L)	NA	15000	NA	NA	11000	11000	NA	16000
SODIUM (µg/L)	NA	14000	NA	NA	210000	62000	NA	260000
ETHANE (µg/L)	NA	--	NA	NA	0.23 J	--	NA	3.2
ETHENE (µg/L)	NA	--	NA	NA	--	--	NA	1.8
METHANE (µg/L)	NA	11	NA	NA	96	11	NA	1700

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW27B MRC-MW27B-032713 3/27/2013	MRC-MW27C MRC-MW27C-032713 3/27/2013	MRC-MW29A MRC-MW29A-032613 3/26/2013	MRC-MW30A MRC-MW30A-031513 3/15/2013	MRC-MW31A MRC-MW31A-031513 3/15/2013	MRC-MW32A MRC-MW32A-031513 3/15/2013	MRC-MW33A MRC-MW33A-031513 3/15/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	NA	NA	--	--
1,1-DICHLOROETHANE	90	--	--	5.1	NA	NA	--	0.25 J
1,1-DICHLOROETHENE	7	9.8 J	--	3	NA	NA	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	NA	NA	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	NA	NA	--	--
1,2-DICHLOROETHANE	5	--	--	--	NA	NA	--	--
1,4-DICHLOROBENZENE	75	--	--	--	NA	NA	--	--
2-BUTANONE	700	--	--	--	NA	NA	--	--
ACETONE	550	--	--	--	NA	NA	--	--
BENZENE	5	--	--	--	NA	NA	--	--
CARBON DISULFIDE	100	--	--	--	NA	NA	--	--
CARBON TETRACHLORIDE	5	--	--	--	NA	NA	--	--
CHLOROBENZENE	100	--	--	--	NA	NA	--	--
CHLOROETHANE	3.6	--	--	--	NA	NA	--	--
CHLOROFORM	80	--	--	--	NA	NA	--	--
CIS-1,2-DICHLOROETHENE	70	310	--	3.9	NA	NA	--	2.4
DICHLORODIFLUOROMETHANE	NA	--	--	--	NA	NA	--	--
DIISOPROPYL ETHER	NA	--	--	--	NA	NA	--	--
ETHYLBENZENE	700	--	--	--	NA	NA	--	--
ISOPROPYLBENZENE	66	--	--	--	NA	NA	--	--
M+P-XYLENES	10000	--	--	--	NA	NA	--	--
METHYL TERT-BUTYL ETHER	20	--	--	5 J	NA	NA	--	3.8
METHYLENE CHLORIDE	5	--	--	--	NA	NA	--	--
NAPHTHALENE	0.65	--	--	--	NA	NA	--	--
N-BUTYLBENZENE	NA	--	--	--	NA	NA	--	--
N-PROPYLBENZENE	NA	--	--	--	NA	NA	--	--
O-XYLENE	10000	--	--	--	NA	NA	--	--
SEC-BUTYLBENZENE	NA	--	--	--	NA	NA	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	NA	NA	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	5.9 J	NA	NA	--	--
TETRACHLOROETHENE	5	--	--	--	NA	NA	--	--
TOLUENE	1000	--	--	--	NA	NA	--	--
TOTAL XYLENES	10000	--	--	--	NA	NA	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	NA	NA	--	--
TRICHLOROETHENE	5	1000	--	10	NA	NA	0.62 J	2.8
TRICHLOROFLUOROMETHANE	NA	--	--	--	NA	NA	--	--
VINYL CHLORIDE	2	12 J	--	0.59 J	NA	NA	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	NA	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW27B MRC-MW27B-032713 3/27/2013	MRC-MW27C MRC-MW27C-032713 3/27/2013	MRC-MW29A MRC-MW29A-032613 3/26/2013	MRC-MW30A MRC-MW30A-031513 3/15/2013	MRC-MW31A MRC-MW31A-031513 3/15/2013	MRC-MW32A MRC-MW32A-031513 3/15/2013	MRC-MW33A MRC-MW33A-031513 3/15/2013
Total metals (µg/L)								
ANTIMONY	6	--	NA	--	2.3	--	NA	--
ARSENIC	10	--	NA	--	--	--	NA	--
BARIUM	2000	79	NA	320	46	93	NA	43
BERYLLIUM	4	0.89 J	NA	8.7	0.22 J	5.1	NA	8.5
CADMIUM	5	0.16 J	NA	0.83 J	0.13 J	--	NA	0.47 J
CHROMIUM	100	--	NA	1.6 J	2.5	--	NA	1.3 J
COBALT	NA	150	NA	330	18	45	NA	74
COPPER	1300	5	NA	12 L	--	22	NA	9.1
LEAD	15	0.46 J	NA	0.36 J	0.44 J	0.36 J	NA	0.37 J
MANGANESE	50	110	NA	NA	NA	NA	NA	NA
MERCURY	2	--	NA	0.15 J	--	--	NA	--
MOLYBDENUM	NA	--	NA	--	1.4 J	--	NA	0.29 J
NICKEL	73	170	NA	160 L	8.8	83	NA	57
POTASSIUM	NA	7100	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	NA	0.95 J	2 J	--	NA	--
SILVER	100	--	NA	--	0.14 J	--	NA	--
THALLIUM	2	0.36 J	NA	--	--	--	NA	--
VANADIUM	3.7	--	NA	1.3 J	13 J	--	NA	0.8 J
ZINC	5000	220 K	NA	270	13 J	74	NA	160
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	45	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	--	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	170	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	2.1	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	0.14	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	--	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	7.7	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	310	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	18000	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	270	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	3200 J	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	7200	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	89000	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	--	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	--	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	11	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW34A MRC-MW34A-031513 3/15/2013	MRC-MW34B MRC-MW34B-032113 3/21/2013	MRC-MW34C MRC-MW34C-032113 3/21/2013	MRC-MW37A MRC-MW37A-032613 3/26/2013	MRC-MW37B MRC-MW37B-032113 3/21/2013	MRC-MW37C MRC-MW37C-032113 3/21/2013	MRC-MW38A MRC-MW-38A-032013 3/20/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	0.77 J	--	--	--	--	--
1,1-DICHLOROETHENE	7	--	0.29 J	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--
ACETONE	550	--	--	--	--	--	--	--
BENZENE	5	--	--	--	--	--	--	--
CARBON DISULFIDE	100	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	6.3	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	--	--
CHLOROFORM	80	--	1.8	--	--	--	--	4.3
CIS-1,2-DICHLOROETHENE	70	--	18	--	1.4 J	3.7	--	--
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	21	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--
O-XYLENE	10000	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--	--	--
TRICHLOROETHENE	5	20	19	--	78	21	0.46 J	--
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--
VINYL CHLORIDE	2	--	2.7	--	--	--	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	NA	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW34A MRC-MW34A-031513 3/15/2013	MRC-MW34B MRC-MW34B-032113 3/21/2013	MRC-MW34C MRC-MW34C-032113 3/21/2013	MRC-MW37A MRC-MW37A-032613 3/26/2013	MRC-MW37B MRC-MW37B-032113 3/21/2013	MRC-MW37C MRC-MW37C-032113 3/21/2013	MRC-MW38A MRC-MW-38A-032013 3/20/2013
Total metals (µg/L)								
ANTIMONY	6	NA	--	NA	--	NA	NA	NA
ARSENIC	10	NA	--	NA	--	NA	NA	NA
BARIUM	2000	NA	160	NA	45	NA	NA	NA
BERYLLIUM	4	NA	11	NA	0.43 J	NA	NA	NA
CADMIUM	5	NA	0.39 J	NA	--	NA	NA	NA
CHROMIUM	100	NA	--	NA	--	NA	NA	NA
COBALT	NA	NA	110	NA	3.2	NA	NA	NA
COPPER	1300	NA	30	NA	0.54 J	NA	NA	NA
LEAD	15	NA	0.26 J	NA	0.45 J	NA	NA	NA
MANGANESE	50	NA	420	NA	33	37	NA	NA
MERCURY	2	NA	--	NA	--	NA	NA	NA
MOLYBDENUM	NA	NA	--	NA	--	NA	NA	NA
NICKEL	73	NA	150	NA	1.9 J	NA	NA	NA
POTASSIUM	NA	NA	6400	NA	5100	3100 J	NA	NA
SELENIUM	50	NA	0.79 J	NA	0.58 J	NA	NA	NA
SILVER	100	NA	--	NA	--	NA	NA	NA
THALLIUM	2	NA	0.36 J	NA	--	NA	NA	NA
VANADIUM	3.7	NA	0.83 J	NA	--	NA	NA	NA
ZINC	5000	NA	310 K	NA	6.4 J	NA	NA	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	3.5 J	NA	33	42	NA	NA
AMMONIA-N (mg/L)	NA	NA	--	NA	--	--	NA	NA
CHLORIDE (mg/L)	NA	NA	160	NA	73 K	20	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	1.6	NA	2.9	3.8	NA	NA
NITRATE-N (mg/L)	NA	NA	0.37	NA	0.95	0.61	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	--	NA	--	--	NA	NA
SULFATE (mg/L)	NA	NA	18	NA	63	21	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	540	NA	230	110	NA	NA
CALCIUM (µg/L)	NA	NA	13000	NA	43000	18000	NA	NA
IRON (µg/L)	300	NA	290	NA	510	390	NA	NA
MAGNESIUM (µg/L)	NA	NA	12000	NA	8400	3900 J	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	9100	NA	6400	10000	NA	NA
SODIUM (µg/L)	NA	NA	71000	NA	17000	12000	NA	NA
ETHANE (µg/L)	NA	NA	0.22 J	NA	--	--	NA	NA
ETHENE (µg/L)	NA	NA	--	NA	--	--	NA	NA
METHANE (µg/L)	NA	NA	49	NA	--	0.35 J	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW38B MRC-MW-38B-032013 3/20/2013	MRC-MW41A MRC-MW41A-042913 4/29/2013	MRC-MW42A MRC-MW42A-041813 4/18/2013	MRC-MW44A MRC-MW44A-031813 3/18/2013	MRC-MW46A MRC-MW46A-042413 4/24/2013	MRC-MW48A MRC-MW48A-042913 4/29/2013	MRC-MW49A MRC-MW49A-042413 4/24/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	NA	NA	NA	--	--
1,1-DICHLOROETHANE	90	--	--	NA	NA	NA	--	--
1,1-DICHLOROETHENE	7	--	--	NA	NA	NA	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	NA	NA	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	NA	NA	--	--
1,2-DICHLOROETHANE	5	--	--	NA	NA	NA	--	--
1,4-DICHLOROBENZENE	75	--	--	NA	NA	NA	--	--
2-BUTANONE	700	--	--	NA	NA	NA	--	--
ACETONE	550	--	--	NA	NA	NA	--	--
BENZENE	5	--	--	NA	NA	NA	--	--
CARBON DISULFIDE	100	--	--	NA	NA	NA	--	--
CARBON TETRACHLORIDE	5	--	--	NA	NA	NA	--	--
CHLOROBENZENE	100	--	--	NA	NA	NA	--	--
CHLOROETHANE	3.6	--	--	NA	NA	NA	--	--
CHLOROFORM	80	--	--	NA	NA	NA	--	--
CIS-1,2-DICHLOROETHENE	70	--	--	NA	NA	NA	590	--
DICHLORODIFLUOROMETHANE	NA	--	--	NA	NA	NA	--	--
DIISOPROPYL ETHER	NA	--	--	NA	NA	NA	--	--
ETHYLBENZENE	700	--	--	NA	NA	NA	--	--
ISOPROPYLBENZENE	66	--	--	NA	NA	NA	--	--
M+P-XYLENES	10000	--	--	NA	NA	NA	--	--
METHYL TERT-BUTYL ETHER	20	--	--	NA	NA	NA	--	--
METHYLENE CHLORIDE	5	--	--	NA	NA	NA	19 J	--
NAPHTHALENE	0.65	--	--	NA	NA	NA	--	--
N-BUTYLBENZENE	NA	--	--	NA	NA	NA	--	--
N-PROPYLBENZENE	NA	--	--	NA	NA	NA	--	--
O-XYLENE	10000	--	--	NA	NA	NA	--	--
SEC-BUTYLBENZENE	NA	--	--	NA	NA	NA	--	--
TERT-AMYL METHYL ETHER	NA	--	--	NA	NA	NA	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	NA	NA	--	--
TETRACHLOROETHENE	5	0.42 J	--	NA	NA	NA	--	--
TOLUENE	1000	--	--	NA	NA	NA	--	--
TOTAL XYLENES	10000	--	--	NA	NA	NA	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	NA	NA	NA	4.9 J	--
TRICHLOROETHENE	5	0.23 J	--	NA	NA	NA	700	0.33 J
TRICHLOROFLUOROMETHANE	NA	--	--	NA	NA	NA	--	--
VINYL CHLORIDE	2	--	--	NA	NA	NA	56	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	--	NA	2.4	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	--	NA	NA	NA	NA	1.7

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW38B MRC-MW-38B-032013 3/20/2013	MRC-MW41A MRC-MW41A-042913 4/29/2013	MRC-MW42A MRC-MW42A-041813 4/18/2013	MRC-MW44A MRC-MW44A-031813 3/18/2013	MRC-MW46A MRC-MW46A-042413 4/24/2013	MRC-MW48A MRC-MW48A-042913 4/29/2013	MRC-MW49A MRC-MW49A-042413 4/24/2013
Total metals (µg/L)								
ANTIMONY	6	NA	--	--	NA	6.2	--	--
ARSENIC	10	NA	0.98 J	--	NA	--	--	--
BARIUM	2000	NA	610	630	NA	160	160	310
BERYLLIUM	4	NA	1	20	NA	0.21 J	3.1	18
CADMIUM	5	NA	--	0.22 J	NA	0.12 J	--	2.1
CHROMIUM	100	NA	--	2.2 J	NA	--	--	4.5
COBALT	NA	NA	550	290	NA	2.4	100	720
COPPER	1300	NA	1.2 J	5	NA	11	--	60
LEAD	15	NA	0.53 J	1.1 J	NA	0.61 J	--	1.1
MANGANESE	50	NA	NA	NA	NA	NA	9700	NA
MERCURY	2	NA	--	--	NA	--	--	--
MOLYBDENUM	NA	NA	0.26 J	--	NA	1.9 J	--	--
NICKEL	73	NA	400	370	NA	10	63	1300
POTASSIUM	NA	NA	NA	NA	NA	NA	420 J	NA
SELENIUM	50	NA	--	1.5 J	NA	0.77 J	--	2.5 J
SILVER	100	NA	--	--	NA	--	--	0.78 J
THALLIUM	2	NA	--	--	NA	--	--	0.8 J
VANADIUM	3.7	NA	--	--	NA	2.4 J	--	--
ZINC	5000	NA	39 K	410 K	NA	300	60	1400
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	60	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	--	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	73	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	3.8	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	--	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	--	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	6.6	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	190	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	1600 J	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	31000	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	11000	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	12000	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	28000	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	31	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	13	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	4800	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW50A MRC-MW50A-042413 4/24/2013	MRC-MW51A MRC-MW51A-040513 4/5/2013	MRC-MW52A MRC-MW52A-040513 4/5/2013	MRC-MW53A MRC-MW53A-032613 3/26/2013	MRC-MW53B MRC-MW53B-032613 3/26/2013	MRC-MW54A MRC-MW54A-040913 4/9/2013	MRC-MW56A MRC-MW56A-050813 5/8/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	NA	NA	--	--	NA	NA
1,1-DICHLOROETHANE	90	--	NA	NA	--	--	NA	NA
1,1-DICHLOROETHENE	7	--	NA	NA	--	9	NA	NA
1,2,3-TRIMETHYLBENZENE	NA	--	NA	NA	--	--	NA	NA
1,2,4-TRIMETHYLBENZENE	NA	0.17 J	NA	NA	--	--	NA	NA
1,2-DICHLOROETHANE	5	--	NA	NA	--	--	NA	NA
1,4-DICHLOROBENZENE	75	--	NA	NA	--	--	NA	NA
2-BUTANONE	700	--	NA	NA	--	--	NA	NA
ACETONE	550	--	NA	NA	--	--	NA	NA
BENZENE	5	1.4	NA	NA	0.71 J	0.84 J	NA	NA
CARBON DISULFIDE	100	--	NA	NA	--	--	NA	NA
CARBON TETRACHLORIDE	5	--	NA	NA	--	--	NA	NA
CHLOROBENZENE	100	--	NA	NA	--	--	NA	NA
CHLOROETHANE	3.6	--	NA	NA	--	--	NA	NA
CHLOROFORM	80	--	NA	NA	--	1.1 J	NA	NA
CIS-1,2-DICHLOROETHENE	70	0.58 J	NA	NA	1.4	6.3	NA	NA
DICHLORODIFLUOROMETHANE	NA	--	NA	NA	--	--	NA	NA
DIISOPROPYL ETHER	NA	--	NA	NA	--	--	NA	NA
ETHYLBENZENE	700	0.28 J	NA	NA	--	--	NA	NA
ISOPROPYLBENZENE	66	--	NA	NA	--	--	NA	NA
M+P-XYLENES	10000	0.58 J	NA	NA	--	--	NA	NA
METHYL TERT-BUTYL ETHER	20	0.43 J	NA	NA	1.4 J	--	NA	NA
METHYLENE CHLORIDE	5	--	NA	NA	--	--	NA	NA
NAPHTHALENE	0.65	--	NA	NA	--	--	NA	NA
N-BUTYLBENZENE	NA	--	NA	NA	--	--	NA	NA
N-PROPYLBENZENE	NA	--	NA	NA	--	--	NA	NA
O-XYLENE	10000	0.21 J	NA	NA	--	--	NA	NA
SEC-BUTYLBENZENE	NA	--	NA	NA	--	--	NA	NA
TERT-AMYL METHYL ETHER	NA	--	NA	NA	--	--	NA	NA
TERTIARY-BUTYL ALCOHOL	NA	--	NA	NA	--	--	NA	NA
TETRACHLOROETHENE	5	--	NA	NA	--	--	NA	NA
TOLUENE	1000	--	NA	NA	--	--	NA	NA
TOTAL XYLENES	10000	0.79 J	NA	NA	--	--	NA	NA
TRANS-1,2-DICHLOROETHENE	100	--	NA	NA	--	--	NA	NA
TRICHLOROETHENE	5	18	NA	NA	10	210	NA	NA
TRICHLOROFLUOROMETHANE	NA	--	NA	NA	--	--	NA	NA
VINYL CHLORIDE	2	--	NA	NA	--	--	NA	NA
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	--	10	--	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	0.53	--	0.1 J	0.75	9.3	--	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW50A MRC-MW50A-042413 4/24/2013	MRC-MW51A MRC-MW51A-040513 4/5/2013	MRC-MW52A MRC-MW52A-040513 4/5/2013	MRC-MW53A MRC-MW53A-032613 3/26/2013	MRC-MW53B MRC-MW53B-032613 3/26/2013	MRC-MW54A MRC-MW54A-040913 4/9/2013	MRC-MW56A MRC-MW56A-050813 5/8/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	4	3.4	1.2 J	NA	--
ARSENIC	10	--	--	--	--	--	NA	--
BARIUM	2000	59	100	390	200	220	NA	480
BERYLLIUM	4	3.3	36	10	0.32 J	1.2	NA	0.12 J
CADMIUM	5	0.15 J	0.47 J	0.79 J	0.73 J	0.22 J	NA	--
CHROMIUM	100	--	--	--	1.3 J	1.9 J	NA	--
COBALT	NA	26	420	570	320	53	NA	70
COPPER	1300	7.5	11	30	10 L	4 L	NA	0.58 J
LEAD	15	0.83 J	1.1	0.36 J	0.41 J	--	NA	0.21 J
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	--	--	--	NA	--
MOLYBDENUM	NA	--	--	0.61 J	--	--	NA	--
NICKEL	73	29	730	370	300 L	72 L	NA	56
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	3.2 J	1.2 J	--	1.4 J	0.71 J	NA	--
SILVER	100	--	--	0.15 J	--	--	NA	--
THALLIUM	2	0.23 J	--	0.36 J	--	--	NA	--
VANADIUM	3.7	2.1 J	--	1.9 J	2.8 J	--	NA	--
ZINC	5000	31 K	780 K	550 K	300	530	NA	37
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW57A MRC-MW57A-042313 4/23/2013	MRC-MW58A MRC-MW58A-042313 4/23/2013	MRC-MW59A MRC-MW59A-042313 4/23/2013	MRC-MW60A MRC-MW60A-040213 4/2/2013	MRC-MW60B MRC-MW60B-040213 4/2/2013	MRC-MW61A MRC-MW61A-042213 4/22/2013	MRC-MW62A MRC-MW62A-031813 3/18/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	NA	--	--	NA	NA
1,1-DICHLOROETHANE	90	--	--	NA	--	--	NA	NA
1,1-DICHLOROETHENE	7	--	--	NA	--	--	NA	NA
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	--	--	NA	NA
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	--	--	NA	NA
1,2-DICHLOROETHANE	5	--	--	NA	--	--	NA	NA
1,4-DICHLOROBENZENE	75	--	--	NA	--	--	NA	NA
2-BUTANONE	700	--	--	NA	--	--	NA	NA
ACETONE	550	--	--	NA	--	--	NA	NA
BENZENE	5	--	--	NA	--	--	NA	NA
CARBON DISULFIDE	100	--	--	NA	--	--	NA	NA
CARBON TETRACHLORIDE	5	--	--	NA	--	--	NA	NA
CHLOROBENZENE	100	--	--	NA	--	--	NA	NA
CHLOROETHANE	3.6	--	--	NA	--	--	NA	NA
CHLOROFORM	80	--	--	NA	--	--	NA	NA
CIS-1,2-DICHLOROETHENE	70	--	--	NA	260	150 J	NA	NA
DICHLORODIFLUOROMETHANE	NA	--	--	NA	--	--	NA	NA
DIISOPROPYL ETHER	NA	--	--	NA	--	--	NA	NA
ETHYLBENZENE	700	--	--	NA	--	--	NA	NA
ISOPROPYLBENZENE	66	--	--	NA	--	--	NA	NA
M+P-XYLENES	10000	--	--	NA	--	--	NA	NA
METHYL TERT-BUTYL ETHER	20	--	--	NA	--	--	NA	NA
METHYLENE CHLORIDE	5	--	--	NA	18 J	82 J	NA	NA
NAPHTHALENE	0.65	--	--	NA	--	--	NA	NA
N-BUTYLBENZENE	NA	--	--	NA	--	--	NA	NA
N-PROPYLBENZENE	NA	--	--	NA	--	--	NA	NA
O-XYLENE	10000	--	--	NA	--	--	NA	NA
SEC-BUTYLBENZENE	NA	--	--	NA	--	--	NA	NA
TERT-AMYL METHYL ETHER	NA	--	--	NA	--	--	NA	NA
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	--	--	NA	NA
TETRACHLOROETHENE	5	--	--	NA	13 J	--	NA	NA
TOLUENE	1000	--	--	NA	--	--	NA	NA
TOTAL XYLENES	10000	--	--	NA	--	--	NA	NA
TRANS-1,2-DICHLOROETHENE	100	--	--	NA	--	--	NA	NA
TRICHLOROETHENE	5	--	--	NA	870	5100	NA	NA
TRICHLOROFLUOROMETHANE	NA	--	--	NA	--	--	NA	NA
VINYL CHLORIDE	2	--	--	NA	35	--	NA	NA
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	--	NA	NA	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	--	--	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW57A MRC-MW57A-042313 4/23/2013	MRC-MW58A MRC-MW58A-042313 4/23/2013	MRC-MW59A MRC-MW59A-042313 4/23/2013	MRC-MW60A MRC-MW60A-040213 4/2/2013	MRC-MW60B MRC-MW60B-040213 4/2/2013	MRC-MW61A MRC-MW61A-042213 4/22/2013	MRC-MW62A MRC-MW62A-031813 3/18/2013
Total metals (µg/L)								
ANTIMONY	6	--	NA	--	--	--	0.43 J	--
ARSENIC	10	2.2 J	NA	1.5 J	1.8 J	--	--	--
BARIUM	2000	120	NA	150	53	62	520	44
BERYLLIUM	4	0.41 J	NA	8.2	2.2	0.39 J	4.1	6.1
CADMIUM	5	--	NA	0.33 J	--	--	1.8	--
CHROMIUM	100	1 J	NA	--	--	--	--	1.1 J
COBALT	NA	580	NA	810	67	41	690	22
COPPER	1300	--	NA	4.5	--	--	8.9 J	--
LEAD	15	0.65 J	NA	--	--	--	1.3	--
MANGANESE	50	NA	NA	NA	NA	2000	NA	NA
MERCURY	2	--	NA	--	--	--	--	--
MOLYBDENUM	NA	--	NA	--	--	--	--	--
NICKEL	73	440	NA	560	70	66	320	110
POTASSIUM	NA	NA	NA	NA	NA	2200 J	NA	NA
SELENIUM	50	--	NA	0.62 J	--	--	--	--
SILVER	100	--	NA	--	--	--	--	--
THALLIUM	2	--	NA	--	--	--	0.2 J	--
VANADIUM	3.7	--	NA	--	--	--	0.9 J	--
ZINC	5000	110	NA	1200	49	110	370 K	89
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	57	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	0.041 J	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	16	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	0.57 J	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	--	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	--	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	2.5	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	91	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	4000 J	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	16000	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	5600	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	11000	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	13000	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	--	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	--	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	70	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW62C MRC-MW62C-031813 3/18/2013	MRC-MW63A MRC-MW63A-040313 4/3/2013	MRC-MW64A MRC-MW64A-042513 4/25/2013	MRC-MW66A MRC-MW66A-042513 4/25/2013	MRC-MW67A MRC-MW67A-040313 4/3/2013	MRC-MW68A MRC-MW68A-040313 4/3/2013	MRC-MW69A MRC-MW69A-040113 4/1/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	NA	--	NA	NA	NA	NA	--
1,1-DICHLOROETHANE	90	NA	--	NA	NA	NA	NA	--
1,1-DICHLOROETHENE	7	NA	--	NA	NA	NA	NA	--
1,2,3-TRIMETHYLBENZENE	NA	NA	--	NA	NA	NA	NA	--
1,2,4-TRIMETHYLBENZENE	NA	NA	--	NA	NA	NA	NA	--
1,2-DICHLOROETHANE	5	NA	--	NA	NA	NA	NA	--
1,4-DICHLOROBENZENE	75	NA	--	NA	NA	NA	NA	--
2-BUTANONE	700	NA	--	NA	NA	NA	NA	--
ACETONE	550	NA	--	NA	NA	NA	NA	--
BENZENE	5	NA	0.27 J	NA	NA	NA	NA	--
CARBON DISULFIDE	100	NA	--	NA	NA	NA	NA	--
CARBON TETRACHLORIDE	5	NA	--	NA	NA	NA	NA	--
CHLOROBENZENE	100	NA	--	NA	NA	NA	NA	--
CHLOROETHANE	3.6	NA	--	NA	NA	NA	NA	--
CHLOROFORM	80	NA	--	NA	NA	NA	NA	--
CIS-1,2-DICHLOROETHENE	70	NA	--	NA	NA	NA	NA	--
DICHLORODIFLUOROMETHANE	NA	NA	--	NA	NA	NA	NA	--
DIISOPROPYL ETHER	NA	NA	--	NA	NA	NA	NA	--
ETHYLBENZENE	700	NA	--	NA	NA	NA	NA	--
ISOPROPYLBENZENE	66	NA	--	NA	NA	NA	NA	--
M+P-XYLENES	10000	NA	--	NA	NA	NA	NA	--
METHYL TERT-BUTYL ETHER	20	NA	--	NA	NA	NA	NA	--
METHYLENE CHLORIDE	5	NA	--	NA	NA	NA	NA	--
NAPHTHALENE	0.65	NA	--	NA	NA	NA	NA	--
N-BUTYLBENZENE	NA	NA	--	NA	NA	NA	NA	--
N-PROPYLBENZENE	NA	NA	--	NA	NA	NA	NA	--
O-XYLENE	10000	NA	--	NA	NA	NA	NA	--
SEC-BUTYLBENZENE	NA	NA	--	NA	NA	NA	NA	--
TERT-AMYL METHYL ETHER	NA	NA	--	NA	NA	NA	NA	--
TERTIARY-BUTYL ALCOHOL	NA	NA	--	NA	NA	NA	NA	--
TETRACHLOROETHENE	5	NA	--	NA	NA	NA	NA	--
TOLUENE	1000	NA	--	NA	NA	NA	NA	--
TOTAL XYLENES	10000	NA	--	NA	NA	NA	NA	--
TRANS-1,2-DICHLOROETHENE	100	NA	--	NA	NA	NA	NA	--
TRICHLOROETHENE	5	NA	0.18 J	NA	NA	NA	NA	--
TRICHLOROFLUOROMETHANE	NA	NA	--	NA	NA	NA	NA	--
VINYL CHLORIDE	2	NA	--	NA	NA	NA	NA	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	--	NA	NA	NA	NA	1.1
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	--	NA	NA	NA	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW62C MRC-MW62C-031813 3/18/2013	MRC-MW63A MRC-MW63A-040313 4/3/2013	MRC-MW64A MRC-MW64A-042513 4/25/2013	MRC-MW66A MRC-MW66A-042513 4/25/2013	MRC-MW67A MRC-MW67A-040313 4/3/2013	MRC-MW68A MRC-MW68A-040313 4/3/2013	MRC-MW69A MRC-MW69A-040113 4/1/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	NA	--	--	--	0.8 J
ARSENIC	10	2 J	--	NA	--	--	--	--
BARIUM	2000	120	73	NA	74	780	2500	300 J
BERYLLIUM	4	0.59 J	0.19 J	NA	--	400 K	280 K	0.73 J
CADMIUM	5	--	--	NA	--	8.6	9.4	1.2
CHROMIUM	100	4.9	--	NA	--	1.6 J	--	1.5 J
COBALT	NA	82	12	NA	1.6	8100	1300	220
COPPER	1300	--	5.6	NA	0.65 J	1800	120	2.3
LEAD	15	0.27 J	0.79 J	NA	--	5.1	0.83 J	5
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	NA	--	--	--	--
MOLYBDENUM	NA	--	--	NA	0.21 J	--	0.29 J	--
NICKEL	73	110	21	NA	--	14000	6200	350
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	1 J	NA	2.4 J	3.6 J	3.1 J	--
SILVER	100	--	--	NA	--	0.18 J	0.9 J	--
THALLIUM	2	--	--	NA	--	1.1 J	0.42 J	--
VANADIUM	3.7	--	1.3 J	NA	--	0.81 J	--	1.9 J
ZINC	5000	69	15 J	NA	--	21000 K	7800 K	670
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW69B MRC-MW69B-040113 4/1/2013	MRC-MW70A MRC-MW70A-040313 4/3/2013	MRC-MW70B MRC-MW70B-040313 4/3/2013	MRC-MW71A MRC-MW--71A-040313 4/3/2013	MRC-MW71B MRC-MW--71B-040313 4/3/2013	MRC-MW72B MRC-MW72B-032613 3/26/2013	MRC-MW73B MRC-MW73B-031913 3/19/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	0.28 J	--	--	--
1,1-DICHLOROETHANE	90	--	1.3	2.9	1.4	4.9	--	--
1,1-DICHLOROETHENE	7	--	0.69 J	19	19	52	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	0.77 J	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--
ACETONE	550	--	1.3 J	5.6 J	--	--	--	--
BENZENE	5	--	0.13 J	1.2 J	0.26 J	--	--	--
CARBON DISULFIDE	100	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	--	--
CHLOROFORM	80	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	--	1.8	34	--	10	--	2.1 J
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	0.95 J	--	1.4 J	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--
O-XYLENE	10000	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	1.2 J	--	--	--	--
TRICHLOROETHENE	5	--	1.8	75	0.56 J	86	30	130
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--
VINYL CHLORIDE	2	--	--	2.5	0.24 J	--	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	--	1.7	13	1.5	16	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	--	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW69B MRC-MW69B-040113 4/1/2013	MRC-MW70A MRC-MW70A-040313 4/3/2013	MRC-MW70B MRC-MW70B-040313 4/3/2013	MRC-MW71A MRC-MW--71A-040313 4/3/2013	MRC-MW71B MRC-MW--71B-040313 4/3/2013	MRC-MW72B MRC-MW72B-032613 3/26/2013	MRC-MW73B MRC-MW73B-031913 3/19/2013
Total metals (µg/L)								
ANTIMONY	6	NA	--	NA	--	--	NA	NA
ARSENIC	10	NA	2.8 J	NA	--	--	NA	NA
BARIUM	2000	NA	68	NA	39	67	NA	NA
BERYLLIUM	4	NA	1.3 K	NA	6.4 K	--	NA	NA
CADMIUM	5	NA	--	NA	13	--	NA	NA
CHROMIUM	100	NA	--	NA	--	--	NA	NA
COBALT	NA	NA	27	NA	54	29	NA	NA
COPPER	1300	NA	1 J	NA	4.1	--	NA	NA
LEAD	15	NA	0.69 J	NA	0.4 J	--	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	62	NA
MERCURY	2	NA	--	NA	--	--	--	NA
MOLYBDENUM	NA	NA	--	NA	--	--	NA	NA
NICKEL	73	NA	29	NA	110	35	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	1600 J	NA
SELENIUM	50	NA	0.79 J	NA	--	--	NA	NA
SILVER	100	NA	--	NA	--	--	NA	NA
THALLIUM	2	NA	--	NA	--	--	NA	NA
VANADIUM	3.7	NA	1.8 J	NA	0.99 J	--	NA	NA
ZINC	5000	NA	48 K	NA	180 K	84 K	NA	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	5.7	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	--	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	15 K	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	0.62 J	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	0.43	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	0.71	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	1.1	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	15	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	1100 J	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	110 J	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	900 J	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	8300	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	9600	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	--	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	--	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	--	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW74A MRC-MW74A-032113 3/21/2013	MRC-MW74B MRC-MW74B-032113 3/21/2013	MRC-MW74C MRC-MW74C-031913 3/19/2013	MRC-MW75A MRC-MW75A-042313 4/23/2013	MRC-MW76A MRC-MW76A-031813 3/18/2013	MRC-MW76B MRC-MW76B-031813 3/18/2013	MRC-MW77A MRC-MW77A-031913 3/19/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	NA	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	NA	--	1.9	18
1,1-DICHLOROETHENE	7	--	--	--	NA	--	1.3	3
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	NA	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	NA	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	NA	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	NA	--	--	--
2-BUTANONE	700	--	--	--	NA	--	--	--
ACETONE	550	55 J	1900 J	--	NA	--	--	--
BENZENE	5	--	--	--	NA	--	0.17 J	18
CARBON DISULFIDE	100	--	--	--	NA	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	NA	--	--	--
CHLOROBENZENE	100	--	--	--	NA	--	--	--
CHLOROETHANE	3.6	--	--	--	NA	--	--	--
CHLOROFORM	80	--	--	--	NA	--	--	--
CIS-1,2-DICHLOROETHENE	70	29 J	410 J	0.74 J	NA	--	2	4.5
DICHLORODIFLUOROMETHANE	NA	--	--	--	NA	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	NA	--	--	--
ETHYLBENZENE	700	--	--	--	NA	--	--	--
ISOPROPYLBENZENE	66	--	--	--	NA	--	--	0.35 J
M+P-XYLENES	10000	--	--	--	NA	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	NA	--	--	61 J
METHYLENE CHLORIDE	5	--	--	--	NA	--	--	--
NAPHTHALENE	0.65	--	--	--	NA	--	--	--
N-BUTYLBENZENE	NA	--	--	--	NA	--	--	0.51 J
N-PROPYLBENZENE	NA	--	--	--	NA	--	--	--
O-XYLENE	10000	--	--	--	NA	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	NA	--	--	1.5 J
TERT-AMYL METHYL ETHER	NA	--	--	--	NA	--	--	0.3 J
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	NA	--	--	--
TETRACHLOROETHENE	5	--	--	--	NA	--	--	--
TOLUENE	1000	--	--	--	NA	--	--	--
TOTAL XYLENES	10000	--	--	--	NA	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	NA	--	--	--
TRICHLOROETHENE	5	1400	40000	54	NA	0.24 J	19	8.6
TRICHLOROFLUOROMETHANE	NA	--	--	--	NA	--	--	--
VINYL CHLORIDE	2	--	--	--	NA	--	--	1.9 J
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	NA	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	--	0.28 J	NA	--	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW74A MRC-MW74A-032113 3/21/2013	MRC-MW74B MRC-MW74B-032113 3/21/2013	MRC-MW74C MRC-MW74C-031913 3/19/2013	MRC-MW75A MRC-MW75A-042313 4/23/2013	MRC-MW76A MRC-MW76A-031813 3/18/2013	MRC-MW76B MRC-MW76B-031813 3/18/2013	MRC-MW77A MRC-MW77A-031913 3/19/2013
Total metals (µg/L)								
ANTIMONY	6	NA	NA	NA	0.36 J	--	--	--
ARSENIC	10	NA	NA	NA	1.8 J	--	--	--
BARIUM	2000	NA	NA	NA	540	110	100	440
BERYLLIUM	4	NA	NA	NA	9.4	23	0.52 J	20
CADMIUM	5	NA	NA	NA	0.23 J	0.51 J	--	0.14 J
CHROMIUM	100	NA	NA	NA	--	--	--	--
COBALT	NA	NA	NA	NA	240	560	63	260
COPPER	1300	NA	NA	NA	5	--	--	31
LEAD	15	NA	NA	NA	1.3	--	--	0.31 J
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	NA	NA	--	--	--	--
MOLYBDENUM	NA	NA	NA	NA	--	--	--	--
NICKEL	73	NA	NA	NA	490	490	93	520
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	NA	NA	--	0.71 J	--	1.1 J
SILVER	100	NA	NA	NA	--	--	--	0.25 J
THALLIUM	2	NA	NA	NA	0.26 J	--	--	--
VANADIUM	3.7	NA	NA	NA	3 J	--	--	--
ZINC	5000	NA	NA	NA	560	480	130	740
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW78B MRC-MW78B-031813 3/18/2013	MRC-MW79B MRC-MW79B-032013 3/20/2013	MRC-MW80A MRC-MW-80A-040813 4/8/2013	MRC-MW80B MRC-MW-80B-040813 4/8/2013	MRC-MW81A MRC-MW-81A-040213 4/2/2013	MRC-MW81B MRC-MW-81B-040213 4/2/2013	MRC-MW86A MRC-MW86A-031513 3/15/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	NA	--	NA	--	--
1,1-DICHLOROETHANE	90	--	2.5 J	NA	1.2 J	NA	--	--
1,1-DICHLOROETHENE	7	--	4 J	NA	15	NA	7.1 J	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	--	NA	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	--	NA	--	--
1,2-DICHLOROETHANE	5	--	--	NA	--	NA	--	--
1,4-DICHLOROBENZENE	75	--	--	NA	--	NA	--	--
2-BUTANONE	700	--	--	NA	--	NA	--	--
ACETONE	550	--	--	NA	4.1 J	NA	--	--
BENZENE	5	--	2.7 J	NA	--	NA	--	--
CARBON DISULFIDE	100	--	--	NA	--	NA	--	--
CARBON TETRACHLORIDE	5	--	--	NA	--	NA	--	--
CHLOROBENZENE	100	--	--	NA	--	NA	--	--
CHLOROETHANE	3.6	--	--	NA	--	NA	--	--
CHLOROFORM	80	--	--	NA	--	NA	--	--
CIS-1,2-DICHLOROETHENE	70	0.65 J	98	NA	2.2 J	NA	220	--
DICHLORODIFLUOROMETHANE	NA	--	--	NA	--	NA	--	--
DIISOPROPYL ETHER	NA	--	--	NA	--	NA	--	--
ETHYLBENZENE	700	--	--	NA	--	NA	--	--
ISOPROPYLBENZENE	66	--	--	NA	--	NA	--	--
M+P-XYLENES	10000	--	--	NA	--	NA	--	--
METHYL TERT-BUTYL ETHER	20	--	39	NA	--	NA	--	--
METHYLENE CHLORIDE	5	--	--	NA	--	NA	13 J	--
NAPHTHALENE	0.65	--	--	NA	--	NA	--	--
N-BUTYLBENZENE	NA	--	--	NA	--	NA	--	--
N-PROPYLBENZENE	NA	--	--	NA	--	NA	--	--
O-XYLENE	10000	--	--	NA	--	NA	--	--
SEC-BUTYLBENZENE	NA	--	--	NA	--	NA	--	--
TERT-AMYL METHYL ETHER	NA	--	--	NA	--	NA	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	--	NA	--	--
TETRACHLOROETHENE	5	--	--	NA	--	NA	--	--
TOLUENE	1000	--	--	NA	--	NA	--	--
TOTAL XYLENES	10000	--	--	NA	--	NA	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	NA	--	NA	7.7 J	--
TRICHLOROETHENE	5	13	320	NA	57	NA	700	--
TRICHLOROFLUOROMETHANE	NA	--	--	NA	--	NA	--	--
VINYL CHLORIDE	2	--	26	NA	--	NA	50	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	4	10	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW78B MRC-MW78B-031813 3/18/2013	MRC-MW79B MRC-MW79B-032013 3/20/2013	MRC-MW80A MRC-MW-80A-040813 4/8/2013	MRC-MW80B MRC-MW-80B-040813 4/8/2013	MRC-MW81A MRC-MW-81A-040213 4/2/2013	MRC-MW81B MRC-MW-81B-040213 4/2/2013	MRC-MW86A MRC-MW86A-031513 3/15/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	--	NA	--	--	--
ARSENIC	10	1 J	2.9 J	--	NA	1.2 J	--	0.98 J
BARIUM	2000	83	320	21	NA	120	200	120
BERYLLIUM	4	--	2	0.76 J	NA	1.6	--	0.17 J
CADMIUM	5	0.14 J	0.28 J	--	NA	--	--	0.23 J
CHROMIUM	100	--	2.9	1.3 J	NA	--	6.1	--
COBALT	NA	39	300	--	NA	86	4.5	140
COPPER	1300	--	16	27	NA	--	--	--
LEAD	15	--	0.78 J	--	NA	--	0.23 J	--
MANGANESE	50	NA	NA	NA	NA	NA	190	NA
MERCURY	2	--	--	--	NA	--	--	--
MOLYBDENUM	NA	--	--	--	NA	--	--	1.4 J
NICKEL	73	14	100	--	NA	120	13	100
POTASSIUM	NA	NA	NA	NA	NA	NA	2800 J	NA
SELENIUM	50	--	0.52 J	--	NA	0.83 J	--	--
SILVER	100	--	--	--	NA	--	--	--
THALLIUM	2	--	--	--	NA	--	--	--
VANADIUM	3.7	1.2 J	4.8 J	--	NA	--	1.2 J	--
ZINC	5000	100	170	28 K	NA	66	--	25
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	9	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	0.7	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	390	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	1.7	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	--	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	--	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	14	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	570	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	110000	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	3400	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	1400 J	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	5700	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	100000	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	0.29 J	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	8	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	450	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW86B MRC-MW86B-031513 3/15/2013	MRC-MW87A MRC-MW87A-031813 3/18/2013	MRC-MW87B MRC-MW87B-031513 3/15/2013	MRC-MW88B MRC-MW88B-031913 3/19/2013	MRC-MW90B MRC-MW90B-042313 4/23/2013	MRC-MW91A MRC-MW91A-042313 4/23/2013	MRC-MW92C MRC-MW-92C-050213 5/2/2013	MRC-MW93A MRC-MW93A-032113 3/21/2013	MRC-MW93D MRC-MW-93D-043013 4/30/2013
Volatile organic compounds (µg/L)										
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	NA	--	--	--
1,1-DICHLOROETHANE	90	0.19 J	--	--	--	--	NA	--	--	--
1,1-DICHLOROETHENE	7	--	--	--	--	9.6	NA	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	NA	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	NA	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	NA	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	NA	--	--	--
2-BUTANONE	700	--	--	--	--	--	NA	1.6 J	--	--
ACETONE	550	--	--	--	--	3.5 J	NA	10	--	--
BENZENE	5	--	--	--	--	--	NA	--	--	--
CARBON DISULFIDE	100	--	0.16 J	--	--	0.42 J	NA	0.75 J	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	NA	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	NA	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	NA	--	--	--
CHLOROFORM	80	--	--	--	--	0.57 J	NA	--	--	--
CIS-1,2-DICHLOROETHENE	70	--	--	2.2 J	--	3.3	NA	1.2	1.4	--
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	NA	--	--	--
DIISOPROPYL ETHER	NA	--	2 J	--	--	--	NA	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	NA	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--	NA	--	--	--
M+P-XYLENES	10000	--	--	--	--	--	NA	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	NA	--	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	NA	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--	NA	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	NA	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	NA	--	--	--
O-XYLENE	10000	--	--	--	--	--	NA	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	NA	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	NA	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	4.5 J	--	--	--	NA	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	NA	--	--	--
TOLUENE	1000	--	--	--	--	--	NA	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	NA	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--	NA	--	--	--
TRICHLOROETHENE	5	--	--	52	0.46 J	71	NA	1.3	1.7	--
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	NA	--	--	--
VINYL CHLORIDE	2	--	--	--	--	--	NA	--	--	--
Semivolatile organic compounds (µg/L)										
1,4-DIOXANE	3[2]	NA	NA	NA	NA	3.7	4.7	NA	NA	--
Miscellaneous parameters (µg/L)										
PERCHLORATE	2.6	NA	NA	NA	NA	0.48 J	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW86B MRC-MW86B-031513 3/15/2013	MRC-MW87A MRC-MW87A-031813 3/18/2013	MRC-MW87B MRC-MW87B-031513 3/15/2013	MRC-MW88B MRC-MW88B-031913 3/19/2013	MRC-MW90B MRC-MW90B-042313 4/23/2013	MRC-MW91A MRC-MW91A-042313 4/23/2013	MRC-MW92C MRC-MW-92C-050213 5/2/2013	MRC-MW93A MRC-MW93A-032113 3/21/2013	MRC-MW93D MRC-MW-93D-043013 4/30/2013
Total metals (µg/L)										
ANTIMONY	6	--	NA	1.9 J	NA	NA	NA	--	--	--
ARSENIC	10	--	NA	1.4 J	NA	NA	NA	7.7 J	--	1 J
BARIUM	2000	160	NA	150	NA	NA	NA	320 J	180	83
BERYLLIUM	4	0.57 J	NA	0.11 J	NA	NA	NA	15	35	0.13 J
CADMIUM	5	0.13 J	NA	--	NA	NA	NA	0.6 J	2.3	--
CHROMIUM	100	--	NA	11	NA	NA	NA	680 J	4.7	6.2
COBALT	NA	230	NA	11	NA	NA	NA	220 L	1900	2
COPPER	1300	--	NA	6.7	NA	NA	NA	120 J	39	9.5
LEAD	15	0.29 J	NA	0.4 J	NA	NA	NA	41	2.2	8
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	NA	--	NA	NA	NA	--	--	--
MOLYBDENUM	NA	0.3 J	NA	10	NA	NA	NA	12 J	--	0.97 J
NICKEL	73	220	NA	21	NA	NA	NA	620	1800	8.4
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	NA	0.76 J	NA	NA	NA	2.2 J	6.3 K	--
SILVER	100	--	NA	--	NA	NA	NA	--	--	--
THALLIUM	2	--	NA	--	NA	NA	NA	0.69 J	--	--
VANADIUM	3.7	0.85 J	NA	7.8 J	NA	NA	NA	81 J	3.2 J	8.9 J
ZINC	5000	230	NA	6.9 J	NA	NA	NA	380	1300 K	640
Natural attenuation parameters										
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW94B MRC-MW-94B-032013 3/20/2013	MRC-MW94D MRC-MW-94D-043013 4/30/2013	MRC-MW95B MRC-MW95B-031913 3/19/2013	MRC-MW95D MRC-OF-95D-050113 5/1/2013	MRC-MW96A MRC-MW-96A-032713 3/27/2013
Volatile organic compounds (µg/L)						
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	--	--
1,1-DICHLOROETHENE	7	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--
ACETONE	550	--	--	--	--	--
BENZENE	5	--	--	--	--	--
CARBON DISULFIDE	100	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--
CHLOROFORM	80	--	--	--	0.33 J	--
CIS-1,2-DICHLOROETHENE	70	--	--	--	--	26000
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--
O-XYLENE	10000	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--
TRICHLOROETHENE	5	--	--	2.1	--	3300
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--
VINYL CHLORIDE	2	--	--	--	--	--
Semivolatile organic compounds (µg/L)						
1,4-DIOXANE	3[2]	NA	--	NA	--	3.5
Miscellaneous parameters (µg/L)						
PERCHLORATE	2.6	NA	NA	NA	NA	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW94B MRC-MW-94B-032013 3/20/2013	MRC-MW94D MRC-MW-94D-043013 4/30/2013	MRC-MW95B MRC-MW95B-031913 3/19/2013	MRC-MW95D MRC-OF-95D-050113 5/1/2013	MRC-MW96A MRC-MW-96A-032713 3/27/2013
Total metals (µg/L)						
ANTIMONY	6	NA	--	NA	--	--
ARSENIC	10	NA	--	NA	--	--
BARIUM	2000	NA	13	NA	11	220
BERYLLIUM	4	NA	--	NA	0.25 J	9.9
CADMIUM	5	NA	--	NA	0.67 J	0.34 J
CHROMIUM	100	NA	--	NA	--	0.94 J
COBALT	NA	NA	0.97 J	NA	2.7	390
COPPER	1300	NA	9.1	NA	5.7	4.4
LEAD	15	NA	--	NA	0.29 J	0.57 J
MANGANESE	50	NA	NA	NA	NA	NA
MERCURY	2	NA	--	NA	--	--
MOLYBDENUM	NA	NA	--	NA	0.25 J	--
NICKEL	73	NA	4.9	NA	6.7	310
POTASSIUM	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	--	NA	--	1.3 J
SILVER	100	NA	--	NA	0.1 J	--
THALLIUM	2	NA	--	NA	--	--
VANADIUM	3.7	NA	--	NA	--	--
ZINC	5000	NA	6 J	NA	8.7 J	380 K
Natural attenuation parameters						
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW96B MRC-MW-96B-032713 3/27/2013	MRC-MW96D MRC-MW-96D-050613 5/6/2013	MRC-MW98A MRC-MW98A-042913 4/29/2013	MRC-MW98B MRC-MW98B-042913 4/29/2013	MRC-MW100A MRC-MW100A-043013 4/30/2013	MRC-MW100B MRC-MW100B-043013 4/30/2013	MRC-MW101A MRC-MW101A-032013 3/20/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	60	--	--	--
1,1-DICHLOROETHANE	90	--	--	2.2	110	1.2	24	0.94 J
1,1-DICHLOROETHENE	7	--	--	3.4	250 L	0.49 J	79	1.1 J
1,2,3-TRIMETHYLBENZENE	NA	26 J	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	19 J	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--
ACETONE	550	--	--	--	--	--	--	--
BENZENE	5	560	--	--	--	--	--	--
CARBON DISULFIDE	100	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	32	--	--	--
CHLOROFORM	80	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	9.6 J	--	0.56 J	28	0.52 J	41	51
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--
ETHYLBENZENE	700	5.6 J	--	--	--	--	--	--
ISOPROPYLBENZENE	66	5.5 J	--	--	--	--	--	--
M+P-XYLENES	10000	32 J	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	--	25	--	8.4 J	--
NAPHTHALENE	0.65	13 J	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--
O-XYLENE	10000	61	--	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	0.38 J	6.7 J	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--
TOTAL XYLENES	10000	93	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--	--	2.2
TRICHLOROETHENE	5	17 J	--	4.2	530	3	230	8.9
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--
VINYL CHLORIDE	2	--	--	--	--	--	--	4
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	--	--	2.5	120	1.3	45	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	3.6	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW96B MRC-MW-96B-032713 3/27/2013	MRC-MW96D MRC-MW-96D-050613 5/6/2013	MRC-MW98A MRC-MW98A-042913 4/29/2013	MRC-MW98B MRC-MW98B-042913 4/29/2013	MRC-MW100A MRC-MW100A-043013 4/30/2013	MRC-MW100B MRC-MW100B-043013 4/30/2013	MRC-MW101A MRC-MW101A-032013 3/20/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	--	0.43 J	NA	--	NA
ARSENIC	10	--	--	--	--	NA	--	NA
BARIUM	2000	600	6.1 K	45	42	NA	84	NA
BERYLLIUM	4	8.3	0.12 J	--	13	NA	0.75 J	NA
CADMIUM	5	1.8	0.12 J	--	0.21 J	NA	--	NA
CHROMIUM	100	--	--	9.4	--	NA	--	NA
COBALT	NA	790	1.9	--	86	NA	70	NA
COPPER	1300	45	4.1	1.4 J	2.6	NA	0.92 J	NA
LEAD	15	2	--	0.64 J	0.93 J	NA	0.39 J	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	--	--	NA	--	NA
MOLYBDENUM	NA	--	--	0.89 J	--	NA	--	NA
NICKEL	73	1400	3.8 K	2.1	140	NA	120	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	0.83 J	--	2.1 J	--	NA	--	NA
SILVER	100	--	--	--	--	NA	--	NA
THALLIUM	2	--	--	--	--	NA	--	NA
VANADIUM	3.7	--	--	1.8 J	--	NA	0.96 J	NA
ZINC	5000	1400 K	--	--	220	NA	180	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW101B MRC-MW101B-032013 3/20/2013	MRC-MW102A MRC-MW102A-032013 3/20/2013	MRC-MW102B MRC-MW102B-032013 3/20/2013	MRC-MW104A MRC-MW104A-032113 3/21/2013	MRC-MW104B MRC-MW104B-032113 3/21/2013	MRC-MW105A MRC-MW-105A-032013 3/20/2013	MRC-MW106B/C MRC-MW106B/C-040113 4/1/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	NA	--
1,1-DICHLOROETHANE	90	3.9	--	--	--	--	NA	--
1,1-DICHLOROETHENE	7	1	--	--	--	--	NA	0.39 J
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	NA	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	NA	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	NA	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	NA	--
2-BUTANONE	700	--	--	--	--	--	NA	--
ACETONE	550	--	--	--	--	--	NA	--
BENZENE	5	--	1	--	--	--	NA	--
CARBON DISULFIDE	100	--	--	--	--	--	NA	0.4 J
CARBON TETRACHLORIDE	5	--	--	--	--	--	NA	--
CHLOROBENZENE	100	--	--	--	--	--	NA	--
CHLOROETHANE	3.6	--	--	--	--	--	NA	--
CHLOROFORM	80	--	--	--	--	--	NA	0.36 J
CIS-1,2-DICHLOROETHENE	70	2	2.6	360	--	--	NA	0.4 J
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	NA	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	NA	--
ETHYLBENZENE	700	--	--	--	--	--	NA	--
ISOPROPYLBENZENE	66	--	--	--	--	--	NA	--
M+P-XYLENES	10000	--	--	--	--	--	NA	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	NA	--
METHYLENE CHLORIDE	5	--	--	--	--	--	NA	--
NAPHTHALENE	0.65	--	--	--	--	--	NA	--
N-BUTYLBENZENE	NA	--	--	--	--	--	NA	--
N-PROPYLBENZENE	NA	--	--	--	--	--	NA	--
O-XYLENE	10000	--	--	--	--	--	NA	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	NA	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	NA	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	NA	--
TETRACHLOROETHENE	5	--	--	--	--	--	NA	--
TOLUENE	1000	--	--	--	--	--	NA	--
TOTAL XYLENES	10000	--	--	--	--	--	NA	--
TRANS-1,2-DICHLOROETHENE	100	--	--	3.1 J	--	--	NA	--
TRICHLOROETHENE	5	2.3	--	73	--	--	NA	2.7
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	NA	--
VINYL CHLORIDE	2	--	0.55 J	--	--	--	NA	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	NA	NA	NA	NA
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW101B MRC-MW101B-032013 3/20/2013	MRC-MW102A MRC-MW102A-032013 3/20/2013	MRC-MW102B MRC-MW102B-032013 3/20/2013	MRC-MW104A MRC-MW104A-032113 3/21/2013	MRC-MW104B MRC-MW104B-032113 3/21/2013	MRC-MW105A MRC-MW-105A-032013 3/20/2013	MRC-MW106B/C MRC-MW106B/C-040113 4/1/2013
Total metals (µg/L)								
ANTIMONY	6	NA	NA	--	NA	--	--	NA
ARSENIC	10	NA	NA	--	NA	--	--	NA
BARIUM	2000	NA	NA	49	NA	59	53	NA
BERYLLIUM	4	NA	NA	16	NA	11	3.2	NA
CADMIUM	5	NA	NA	1.2	NA	0.65 J	0.38 J	NA
CHROMIUM	100	NA	NA	--	NA	2.3	--	NA
COBALT	NA	NA	NA	450	NA	72	41	NA
COPPER	1300	NA	NA	2.7	NA	13	7.8	NA
LEAD	15	NA	NA	0.42 J	NA	0.21 J	0.28 J	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	NA	--	NA	--	--	NA
MOLYBDENUM	NA	NA	NA	--	NA	--	--	NA
NICKEL	73	NA	NA	630	NA	79	36	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	NA	0.68 J	NA	2.8 J	2.2 J	NA
SILVER	100	NA	NA	--	NA	--	--	NA
THALLIUM	2	NA	NA	--	NA	--	--	NA
VANADIUM	3.7	NA	NA	--	NA	--	--	NA
ZINC	5000	NA	NA	760	NA	240 K	99	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW107B/C MRC-MW107B/C-040113 4/1/2013	MRC-MW109A MRC-MW-109A-040513 4/5/2013	MRC-MW109B MRC-MW-109B-040113 4/1/2013	MRC-MW110A MRC-MW-110A-032613 3/26/2013	MRC-MW110B MRC-MW-110B-032613 3/26/2013	MRC-MW111A MRC-MW-111A-042913 4/29/2013	MRC-MW111B MRC-MW-111B-042913 4/29/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	0.6 J	--	--	29
1,1-DICHLOROETHENE	7	--	5.1	--	0.69 J	0.2 J	--	140
1,2,3-TRIMETHYLBENZENE	NA	--	--	0.39 J	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	1.2 J	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--
ACETONE	550	--	--	--	--	--	--	--
BENZENE	5	--	--	37	1.8	3.3	--	2.5 J
CARBON DISULFIDE	100	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	--	--
CHLOROFORM	80	--	--	--	0.26 J	0.22 J	--	--
CIS-1,2-DICHLOROETHENE	70	--	110	43	9.6	4.3	--	39
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	0.47 J	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	0.36 J	--	--
METHYL TERT-BUTYL ETHER	20	--	--	4.8	--	0.3 J	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	--	11 J
NAPHTHALENE	0.65	--	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--
O-XYLENE	10000	--	--	1.7 J	--	0.41 J	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	1.7 J	--	0.77 J	--	--
TRANS-1,2-DICHLOROETHENE	100	--	2.5 J	4	--	--	--	--
TRICHLOROETHENE	5	--	--	15	32	11	0.29 J	460
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--
VINYL CHLORIDE	2	--	55	--	0.22 J	--	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	NA	NA	1.5	0.91 J	0.68 J	84
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	--	0.33 J	0.75	1.2	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW107B/C MRC-MW107B/C-040113 4/1/2013	MRC-MW109A MRC-MW-109A-040513 4/5/2013	MRC-MW109B MRC-MW-109B-040113 4/1/2013	MRC-MW110A MRC-MW-110A-032613 3/26/2013	MRC-MW110B MRC-MW-110B-032613 3/26/2013	MRC-MW111A MRC-MW-111A-042913 4/29/2013	MRC-MW111B MRC-MW-111B-042913 4/29/2013
Total metals (µg/L)								
ANTIMONY	6	--	--	0.96 J	--	--	NA	--
ARSENIC	10	--	--	--	--	--	NA	4.1 J
BARIUM	2000	62 J	110	190 J	780	68	NA	73
BERYLLIUM	4	--	0.75 J	1.9	3.1	0.31 J	NA	0.34 J
CADMIUM	5	0.11 J	--	0.48 J	0.11 J	--	NA	--
CHROMIUM	100	--	13	--	--	--	NA	--
COBALT	NA	8.7	28	180	650	100	NA	47
COPPER	1300	32	210	6.4	--	0.56 J	NA	--
LEAD	15	0.24 J	9.8	0.22 J	0.47 J	0.47 J	NA	--
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	--	--	--	NA	--
MOLYBDENUM	NA	--	--	--	--	--	NA	--
NICKEL	73	21	29	280	400 L	83 L	NA	84
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	--	--	--	--	NA	--
SILVER	100	--	--	--	--	--	NA	--
THALLIUM	2	--	--	--	--	--	NA	--
VANADIUM	3.7	--	32 J	0.81 J	--	--	NA	--
ZINC	5000	2500	300 K	1000	280	130	NA	59
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW112A MRC-MW-112A-042413 4/24/2013	MRC-OF01 MRC-OF-01-050813 5/8/2013	MRC-OF02A MRC-OF-02A-050613 5/6/2013	MRC-OF02B MRC-OF-02B-050613 5/6/2013	MRC-OF02C MRC-OF-02C-050613 5/6/2013	MRC-OF03A MRC-OF-03A-050713 5/7/2013	MRC-OF03B MRC-OF-03B-050713 5/7/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	7	--	--	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	75	0.27 J	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--
ACETONE	550	--	--	--	--	--	--	--
BENZENE	5	--	--	--	--	--	--	--
CARBON DISULFIDE	100	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--
CHLOROBENZENE	100	1.8	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	--	--
CHLOROFORM	80	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	2.1	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	1.2	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--
O-XYLENE	10000	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--	--	--
TRICHLOROETHENE	5	4.3	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--
VINYL CHLORIDE	2	1.4	--	--	--	--	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	NA	--	--	--	--	--	--
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-MW112A MRC-MW-112A-042413 4/24/2013	MRC-OF01 MRC-OF-01-050813 5/8/2013	MRC-OF02A MRC-OF-02A-050613 5/6/2013	MRC-OF02B MRC-OF-02B-050613 5/6/2013	MRC-OF02C MRC-OF-02C-050613 5/6/2013	MRC-OF03A MRC-OF-03A-050713 5/7/2013	MRC-OF03B MRC-OF-03B-050713 5/7/2013
Total metals (µg/L)								
ANTIMONY	6	--	NA	NA	NA	NA	NA	NA
ARSENIC	10	--	NA	NA	NA	NA	NA	NA
BARIUM	2000	99	NA	NA	NA	NA	NA	NA
BERYLLIUM	4	6.8	NA	NA	NA	NA	NA	NA
CADMIUM	5	--	NA	NA	NA	NA	NA	NA
CHROMIUM	100	--	NA	NA	NA	NA	NA	NA
COBALT	NA	61	NA	NA	NA	NA	NA	NA
COPPER	1300	0.51 J	NA	NA	NA	NA	NA	NA
LEAD	15	--	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	NA	NA	NA	NA	NA	NA
MOLYBDENUM	NA	--	NA	NA	NA	NA	NA	NA
NICKEL	73	76	NA	NA	NA	NA	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	NA	NA	NA	NA	NA	NA
SILVER	100	--	NA	NA	NA	NA	NA	NA
THALLIUM	2	--	NA	NA	NA	NA	NA	NA
VANADIUM	3.7	2.7 J	NA	NA	NA	NA	NA	NA
ZINC	5000	96	NA	NA	NA	NA	NA	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION		MRC-OF03C	MRC-OF04A	MRC-OF04B		MRC-OF04C	MRC-OF05A	MRC-OF05B
SAMPLE ID	MDE GROUNDWATER STANDARD[2]	MRC-OF-03C-050713	MRC-OF04A-050713	MRC-OF04B-050713	MRC-OF04B-050713	MRC-OF04C-050713	MRC-OF-05A-050213	MRC-OF-05B-050213
SAMPLE DATE		5/7/2013	5/7/2013	5/7/2013	5/9/2013	5/7/2013	5/2/2013	5/2/2013
Volatile organic compounds (µg/L)								
1,1,1-TRICHLOROETHANE	200	--	--	--	NA	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	NA	--	--	--
1,1-DICHLOROETHENE	7	--	--	--	NA	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	NA	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	NA	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	NA	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	NA	0.58 J	--	--
2-BUTANONE	700	--	--	--	NA	--	--	--
ACETONE	550	--	--	--	NA	--	1.4 J	11
BENZENE	5	--	--	--	NA	--	--	--
CARBON DISULFIDE	100	--	--	--	NA	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	NA	--	--	--
CHLOROBENZENE	100	--	--	--	NA	--	--	--
CHLOROETHANE	3.6	--	--	--	NA	--	--	--
CHLOROFORM	80	--	0.19 J	--	NA	--	--	--
CIS-1,2-DICHLOROETHENE	70	--	--	--	NA	--	--	--
DICHLORODIFLUOROMETHANE	NA	--	--	--	NA	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	NA	--	--	--
ETHYLBENZENE	700	--	--	--	NA	--	--	--
ISOPROPYLBENZENE	66	--	--	--	NA	--	--	--
M+P-XYLENES	10000	--	--	--	NA	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	NA	--	--	--
METHYLENE CHLORIDE	5	--	--	--	NA	--	--	--
NAPHTHALENE	0.65	--	--	--	NA	--	--	--
N-BUTYLBENZENE	NA	--	--	--	NA	--	--	--
N-PROPYLBENZENE	NA	--	--	--	NA	--	--	--
O-XYLENE	10000	--	--	--	NA	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	NA	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	NA	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	NA	--	--	--
TETRACHLOROETHENE	5	--	--	--	NA	--	--	--
TOLUENE	1000	--	--	--	NA	--	--	--
TOTAL XYLENES	10000	--	--	--	NA	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	NA	--	--	--
TRICHLOROETHENE	5	--	--	--	NA	--	--	--
TRICHLOROFLUOROMETHANE	NA	--	--	--	NA	--	--	--
VINYL CHLORIDE	2	--	--	--	NA	--	--	--
Semivolatile organic compounds (µg/L)								
1,4-DIOXANE	3[2]	--	--	--	--	NA	--	--
Miscellaneous parameters (µg/L)								
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-OF03C MRC-OF-03C-050713 5/7/2013	MRC-OF04A MRC-OF04A-050713 5/7/2013	MRC-OF04B MRC-OF04B-050713 5/7/2013	MRC-OF04B MRC-OF04B-050713 5/9/2013	MRC-OF04C MRC-OF04C-050713 5/7/2013	MRC-OF05A MRC-OF-05A-050213 5/2/2013	MRC-OF05B MRC-OF-05B-050213 5/2/2013
Total metals (µg/L)								
ANTIMONY	6	NA	NA	NA	NA	NA	NA	NA
ARSENIC	10	NA	NA	NA	NA	NA	NA	NA
BARIUM	2000	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	4	NA	NA	NA	NA	NA	NA	NA
CADMIUM	5	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	NA	NA	NA	NA	NA	NA	NA
COBALT	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	1300	NA	NA	NA	NA	NA	NA	NA
LEAD	15	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	NA	NA	NA	NA	NA	NA
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	73	NA	NA	NA	NA	NA	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	NA	NA	NA	NA	NA	NA
SILVER	100	NA	NA	NA	NA	NA	NA	NA
THALLIUM	2	NA	NA	NA	NA	NA	NA	NA
VANADIUM	3.7	NA	NA	NA	NA	NA	NA	NA
ZINC	5000	NA	NA	NA	NA	NA	NA	NA
Natural attenuation parameters								
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-OF05C MRC-OF-05C-050213 5/2/2013	MRC-OF06A MRC-OF-06A-050113 5/1/2013	MRC-OF06B MRC-OF-06B-050113 5/1/2013	MRC-OF06C MRC-OF-06C-050113 5/1/2013	MRC-OF07 MRC-OF07-043013 4/30/2013	MRC-OF08A MRC-OF08A-050113 5/1/2013	MRC-OF08B MRC-OF08B-050113 5/1/2013	MRC-OF08C MRC-OF08C-050113 5/1/2013	MRC-OF08D MRC-OF08D-050113 5/1/2013
Volatile organic compounds (µg/L)										
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	7	--	--	--	--	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	--	--	--
2-BUTANONE	700	--	--	--	--	--	--	--	--	--
ACETONE	550	2.1 J	--	--	--	--	--	--	--	--
BENZENE	5	--	--	--	--	--	--	--	--	--
CARBON DISULFIDE	100	--	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	--	--	--
CHLOROETHANE	3.6	--	--	--	--	--	--	--	--	--
CHLOROFORM	80	--	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	--	--	--	--	--	--	--	--	--
DICHLORODIFLUOROMETHANE	NA	--	--	--	--	--	--	--	--	--
DIISOPROPYL ETHER	NA	--	--	--	--	--	--	--	--	--
ETHYLBENZENE	700	--	--	--	--	--	--	--	--	--
ISOPROPYLBENZENE	66	--	--	--	--	--	--	--	--	--
M+P-XYLENES	10000	--	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	--	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	--	--	--
N-BUTYLBENZENE	NA	--	--	--	--	--	--	--	--	--
N-PROPYLBENZENE	NA	--	--	--	--	--	--	--	--	--
O-XYLENE	10000	--	--	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	NA	--	--	--	--	--	--	--	--	--
TERT-AMYL METHYL ETHER	NA	--	--	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--	--	--
TETRACHLOROETHENE	5	--	--	--	--	--	--	--	--	--
TOLUENE	1000	--	--	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	--	--	--	--	--	--
TRICHLOROETHENE	5	--	--	--	--	--	--	--	--	--
TRICHLOROFLUOROMETHANE	NA	--	--	--	--	--	--	--	--	--
VINYL CHLORIDE	2	--	--	--	--	--	--	--	--	--
Semivolatile organic compounds (µg/L)										
1,4-DIOXANE	3[2]	--	--	--	--	--	--	--	--	--
Miscellaneous parameters (µg/L)										
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[1]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	MDE GROUNDWATER STANDARD[2]	MRC-OF05C MRC-OF-05C-050213 5/2/2013	MRC-OF06A MRC-OF-06A-050113 5/1/2013	MRC-OF06B MRC-OF-06B-050113 5/1/2013	MRC-OF06C MRC-OF-06C-050113 5/1/2013	MRC-OF07 MRC-OF07-043013 4/30/2013	MRC-OF08A MRC-OF08A-050113 5/1/2013	MRC-OF08B MRC-OF08B-050113 5/1/2013	MRC-OF08C MRC-OF08C-050113 5/1/2013	MRC-OF08D MRC-OF08D-050113 5/1/2013
Total metals (µg/L)										
ANTIMONY	6	NA	NA	NA	NA	NA	NA	NA	NA	NA
ARSENIC	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
BARIUM	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
BERYLLIUM	4	NA	NA	NA	NA	NA	NA	NA	NA	NA
CADMIUM	5	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
COBALT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COPPER	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NICKEL	73	NA	NA	NA	NA	NA	NA	NA	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	NA	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
VANADIUM	3.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
ZINC	5000	NA	NA	NA	NA	NA	NA	NA	NA	NA
Natural attenuation parameters										
ALKALINITY (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE-P (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS (mg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IRON (µg/L)	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
MAGNESIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILICON DIOXIDE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SODIUM (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE (µg/L)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, MARCH-MAY 2013[(1)]
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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Shading indicates the concentration exceeds the groundwater standard.

-- - Not detected. See Appendix E for detection limit.

Note: Tentatively identified compounds (TICs) detected for volatile organic compound analyses are shown in Appendix E.

*Maryland does not have a groundwater standard for 1,4-dioxane. This value, the California screening level for 1,4-dioxane in groundwater, is used as proxy.

1 Polychlorinated biphenyls (PCBs) were analyzed for six groundwater samples, but the results are not shown because PCBs were not detected in the samples. Results are in Appendix E. Results for wells MW43A, MW103A and MW103B are not shown because these wells were analyzed for PCBs only; PCBs were not detected in these samples. Results are in Appendix E.

2 - Maryland Department of the Environment Soil and Groundwater Cleanup Standards, Interim Final Guidance, Update No. 2.1, June 2008 (MDE, 2008); California action level is used for 1,4-dioxane.

J - Positive result is considered estimated as a result of technical noncompliance.

K - Positive result is considered to be biased high as a result of technical noncompliance. Result is expected to be lower.

L - Positive result is considered to be biased low as a result of technical noncompliance. Result is expected to be higher.

MDE - Maryland Department of the Environment.

mg/L = milligrams per liter (i.e., parts per million)

NA - not analyzed

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

TABLE 4-4

VOLATILE ORGANIC COMPOUNDS AND NATURAL ATTENUATION ANALYIS PARAMETERS-WESTERN TCE PLUME, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 of 2

Analyte	Favorable Degradation Criteria	Western TCE Plume			
		MW14B	MW21B	MW12A	MW12B
VOLATILES (ug/L)					
Chlorinated Parent Products					
TETRACHLOROETHENE		--	--	--	--
CARBON TETRACHLORIDE		--	--	--	--
TRICHLOROETHENE	Parent product or from degradation of PCE	2,300	660	1500	240
1,1,1-TRICHLOROETHANE		--	--	--	--
Degradation Products					
1,1-DICHLOROETHANE	From degradation of TCA	45 J	10 J	25 J	3.1 J
1,1-DICHLOROETHENE	From degradation of TCE	540	120	310	25
1,2-DICHLOROETHANE	From degradation of TCA	--	--	--	--
CIS-1,2-DICHLOROETHENE	From degradation of TCE	54 J	5.3 J	110	18
TRANS-1,2-DICHLOROETHENE	From degradation of TCE	--	--	--	--
VINYL CHLORIDE	From degradation of DCE	--	--	--	--
CHLOROFORM	From degradation of carbon tetrachloride	--	--	--	--
CHLOROMETHANE	From degradation of chloroform	--	--	--	--
CHLOROETHANE	From degradation of vinyl chloride	--	--	--	--
METHANE	>500	35	11	53	0.77
ETHANE	>100	--	--	--	--
ETHENE	>10	--	--	1.3	--
Petroleum-Related VOCs					
BENZENE	Energy source for degradation >100[(2)]	36 J	23	--	3 J
TOLUENE	Energy source for degradation >100[(2)]	--	--	--	--
ETHYLBENZENE	Energy source for degradation >100[(2)]	--	--	--	--
TOTAL XYLENES	Energy source for degradation >100[(2)]	--	--	--	--
INORGANICS (ug/L)					
IRON	>1,000	37,000	31,000	33,000	7,100
MANGANESE		2,100	3100	1,900	360
POTASSIUM		3,800 J	2600 J	1,900 J	3,600 J

TABLE 4-4

VOLATILE ORGANIC COMPOUNDS AND NATURAL ATTENUATION ANALYIS PARAMETERS-WESTERN TCE PLUME, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 of 2

Analyte	Favorable Degradation Criteria	Western TCE Plume			
		MW14B	MW21B	MW12A	MW12B
MISCELLANEOUS (mg/L or as noted)					
ALKALINITY	2x background [(1)]	16	36	14	51 J
AMMONIA-N		0.32	0.084 J	0.069 J	--
CHLORIDE	2x background [(1)]	120	70 J	47	7.4 K
NITRATE-N	<1	--	--	--	0.053 J
ORTHOPHOSPHATE-P		--	--	0.34 J	--
SULFATE	<20	74	1.9 J	1.6	3.8 K
TOTAL DISSOLVED SOLIDS		330	170	120	87
PH (STANDARD UNITS)	5 - 9	5.29	4.71	5.33	5.54
OXIDATION-REDUCTION POTENTIAL (mV)	<50 or <-100	100	120	63	170
DISSOLVED OXYGEN (mg/L)	<0.5	5.97	0.83	1.01	3.01
TEMPERATURE (DEGREES CELCIUS)	>20	15.56	16	9.44	12.63

1 Results for well MW03A are used for background concentration because it is a hydraulically upgradient well with no history of chlorinated VOC detections. Well MW03A concentrations for chloride and alkalinity are 120 and 200 mg/L, respectively.

2 Total concentration for benzene, toluene, ethylbenzene, and xylenes.

-- - Not detected.

B - Laboratory blank contamination.

J - Positive result is considered estimated as a result of technical noncompliance.

K - Positive result is considered to be biased high as a result of technical noncompliance

mV - milliVolts

mg/L = milligrams per liter

ug/L = micrograms per liter

TABLE 4-5

VOLATILE ORGANIC COMPOUNDS AND NATURAL ATTENUATION ANALYIS PARAMETERS-EASTERN TCE PLUME NORTH, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Analyte	Favorable Degradation Criteria	Eastern TCE Plume - North						
		MW48A	MW60B	MW81B	MW24A	MW25A	MW27A	MW27B
VOLATILES (ug/L)								
Chlorinated Parent Products								
TETRACHLOROETHENE		--	--	--	--	--	--	--
CARBON TETRACHLORIDE		--	--	--	--	--	--	--
TRICHLOROETHENE	Parent product or from degradation of PCE	700	5,100	700	--	230	170	1,000
1,1,1-TRICHLOROETHANE		--	--	--	--	--	--	--
Degradation Products								
1,1-DICHLOROETHANE	From degradation of TCA	--	--	--	--	--	2.1 J	--
1,1-DICHLOROETHENE	From degradation of TCE	--	--	7.1 J	--	--	2.2 J	9.8 J
1,2-DICHLOROETHANE	From degradation of TCA	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	From degradation of TCE	590	150 J	220	--	9.9	43	310
TRANS-1,2-DICHLOROETHENE	From degradation of TCE	4.9 J	--	7.7 J	--	--	--	--
VINYL CHLORIDE	From degradation of DCE	56	--	50	--	--	18	12 J
CHLOROFORM	From degradation of carbon tetrachloride	--	--	--	--	--	--	--
CHLOROMETHANE	From degradation of chloroform	--	--	--	--	--	--	--
CHLOROETHANE	From degradation of vinyl chloride	--	--	--	--	--	--	--
METHANE	>500	4,800	70	450	96	11	1,700	11
ETHANE	>100	31	--	0.29 J	0.23 J	--	3.2	--
ETHENE	>10	13	--	8	--	--	1.8	--
Petroleum-Related VOCs								
BENZENE	Energy source for degradation >100[(2)]	--	--	--	--	1.3 J	1.7 B	--
TOLUENE	Energy source for degradation >100[(2)]	--	--	--	--	--	--	--
ETHYLBENZENE	Energy source for degradation >100[(2)]	--	--	--	--	--	--	--
TOTAL XYLENES	Energy source for degradation >100[(2)]	--	--	--	--	--	--	--
INORGANICS (ug/L)								
IRON	>1,000	31,000	16,000	3,400	420	18,000	94,000	270
MANGANESE		9,700	2,000	190	16,000	3,200	32,000	110
POTASSIUM		420 J	2,200 J	2,800 J	5,400	2,600 J	2,900 J	7,100

TABLE 4-5

VOLATILE ORGANIC COMPOUNDS AND NATURAL ATTENUATION ANALYIS PARAMETERS-EASTERN TCE PLUME NORTH, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Analyte	Favorable Degradation Criteria	Eastern TCE Plume - North						
		MW48A	MW60B	MW81B	MW24A	MW25A	MW27A	MW27B
MISCELLANEOUS (mg/L or as noted)								
ALKALINITY	2x background [(1)]	60	57	9	38	61	38	45
AMMONIA-N		--	0.041 J	0.7	--	0.047 J	1.9	--
CHLORIDE	2x background [(1)]	73	16	390	510	140 J	690	170
NITRATE-N	<1	--	--	--	0.11	--	--	0.14
ORTHOPHOSPHATE-P		98 J	--	--	--	--	--	--
SULFATE	<20	--	2.5	14	3	2.4 J	3,700	8
TOTAL DISSOLVED SOLIDS		190	91	570	950	270	1,000	310
PH (STANDARD UNITS)	5 - 9	4.73	6.16	11.2	5.41	5.73	5.35	5.18
OXIDATION-REDUCTION POTENTIAL (mV)	<50 or <-100	53	41	-148	207	84	-6	161
DISSOLVED OXYGEN (mg/L)	<0.5	5.1	0.58	0.64	7.77	0	155	4.65
TEMPERATURE (DEGREES CELCIUS)	>20	16.16	17.45	16.21	14.42	16.28	13.63	14.92

1 Results for well MW03A are used for background concentration because it is a hydraulically upgradient well with no history of chlorinated VOC detections. Well MW03A concentrations for chloride and alkalinity are 120 and 200 mg/L, respectively.

2 Total concentration for benzene, toluene, ethylbenzene, and xylenes.

-- - Not detected.

B - Laboratory blank contamination.

J - Positive result is considered estimated as a result of technical noncompliance.

K - Positive result is considered to be biased high as a result of technical noncompliance.

mV - milliVolts

mg/L = milligrams per liter

ug/L = micrograms per liter

TABLE 4-6

VOLATILE ORGANIC COMPOUNDS AND NATURAL ATTENUATION ANALYIS PARAMETERS-EASTERN TCE PLUME SOUTH, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 2

Analyte	Favorable Degradation Criteria	Eastern TCE Plume - South			
		MW72B	MW34B	MW37A	MW37B
VOLATILES (ug/L)					
Chlorinated Parent Products					
TETRACHLOROETHENE		--	--	--	--
CARBON TETRACHLORIDE		--	6.3	--	--
TRICHLOROETHENE	Parent product or from degradation of PCE	30	19	78	21
1,1,1-TRICHLOROETHANE		--	--	--	--
Degradation Products					
1,1-DICHLOROETHANE	From degradation of TCA	--	0.77 J	--	--
1,1-DICHLOROETHENE	From degradation of TCE	--	0.29 J	--	--
1,2-DICHLOROETHANE	From degradation of TCA	--	--	--	--
CIS-1,2-DICHLOROETHENE	From degradation of TCE	--	18	1.4 J	3.7
TRANS-1,2-DICHLOROETHENE	From degradation of TCE	--	--	--	--
VINYL CHLORIDE	From degradation of DCE	--	2.7	--	--
CHLOROFORM	From degradation of carbon tetrachloride	--	1.8	--	--
CHLOROMETHANE	From degradation of chloroform	--	--	--	--
CHLOROETHANE	From degradation of vinyl chloride	--	--	--	--
METHANE	>500	0.14 B	49	0.12 B	0.35 J
ETHANE	>100	--	0.22 J	--	--
ETHENE	>10	--	--	--	--
Petroleum-Related VOCs					
BENZENE	Energy source for degradation >100[(2)]	--	--	--	--
TOLUENE	Energy source for degradation >100[(2)]	--	--	--	--
ETHYLBENZENE	Energy source for degradation >100[(2)]	--	--	--	--
TOTAL XYLENES	Energy source for degradation >100[(2)]	--	--	--	--

TABLE 4-6

VOLATILE ORGANIC COMPOUNDS AND NATURAL ATTENUATION ANALYIS PARAMETERS-EASTERN TCE PLUME SOUTH, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Analyte	Favorable Degradation Criteria	Eastern TCE Plume - South			
		MW72B	MW34B	MW37A	MW37B
INORGANICS (ug/L)					
IRON	>1,000	110 J	290	510	390
MANGANESE		62	420	33	37
POTASSIUM		1600 J	6,400	5,100	3,100 J
MISCELLANEOUS (mg/L or as noted)					
ALKALINITY	2x background [(1)]	5.7	3.5 J	33	42
AMMONIA-N		0.083 B	0.083 B	0.066 B	0.038 B
CHLORIDE	2x background [(1)]	15 K	160	73 K	20
NITRATE-N	<1	0.43	0.37	1.0	0.61
ORTHOPHOSPHATE-P		0.71	--	--	--
SULFATE	<20	1.1	18	63	21
TOTAL DISSOLVED SOLIDS		15	540	230	110
PH (STANDARD UNITS)	5 - 9	4.84	4.39	5.2	6.14
OXIDATION-REDUCTION POTENTIAL (mV)	<50 or <-100	250	367	210	197
DISSOLVED OXYGEN (mg/L)	<0.5	3.16	6.53	3.67	2.6
TEMPERATURE (DEGREES CELCIUS)	>20	13.41	13.39	11.32	12.80

1 Results for well MW03A are used for background concentration because it is a hydraulically upgradient well with no history of chlorinated VOC detections. Well MW03A concentrations for chloride and alkalinity are 120 and 200 mg/L, respectively.

2 Total concentration for benzene, toluene, ethylbenzene, and xylenes.

-- - Not detected.

B - Laboratory blank contamination; analyte is not considered to be detected.

J - Positive result is considered estimated as a result of technical noncompliance.

K - Positive result is considered to be biased high as a result of technical noncompliance.

mV - milliVolts

mg/L = milligrams per liter

ug/L = micrograms per liter

TABLE 4-7

SUMMARY OF METALS EXCEEDING MARYLAND GROUNDWATER STANDARDS, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Analyte	MDE Groundwater Standard[1] (ug/L)	Metals Samples		
		Detections Exceeding Standards		Maximum Concentration (ug/L)
		(Quantity)	(Percent)[2]	
MANGANESE	50	14	88%	32,000
IRON	300	13	81%	94,000
NICKEL	73	58	60%	14,000
BERYLLIUM	4	32	33%	400 K
VANADIUM	3.7	8	8%	81 J
CADMIUM	5	3	3%	13
ZINC	5,000	2	2%	21000 K
ANTIMONY	6	1	1%	6.3
BARIUM	2,000	1	1%	2,500
CHROMIUM	100	1	1%	680 J
COPPER	1,300	1	1%	1,800
LEAD	15	1	1%	41
ARSENIC	10	0	0%	7.7 J
MERCURY	2	0	0%	0.17 J
SELENIUM	50	0	0%	6.3 K
SILVER	100	0	0%	0.9 J
THALLIUM	2	0	0%	1.1
CALCIUM	NA	--	--	110,000
COBALT	NA	--	--	8,100
MAGNESIUM	NA	--	--	24,000
MOLYBDENUM	NA	--	--	12 J
POTASSIUM	NA	--	--	7,100
SILICON DIOXIDE	NA	--	--	21,000
SODIUM	NA	--	--	260,000

1 MDE Soil and Groundwater Standards, Interim Final, June 2008.

2 For metals with groundwater standards, percentages are based on 16 samples for manganese and iron and 96 samples for the remaining metals.

J - Positive result is considered estimated as a result of technical noncompliance.

K - Positive result is considered to be biased high as a result of technical noncompliance

NA = not available.

ug/L = Micrograms per liter (i.e., parts per billion)

-- = value is not calculated because a standard is not available for this analyte.

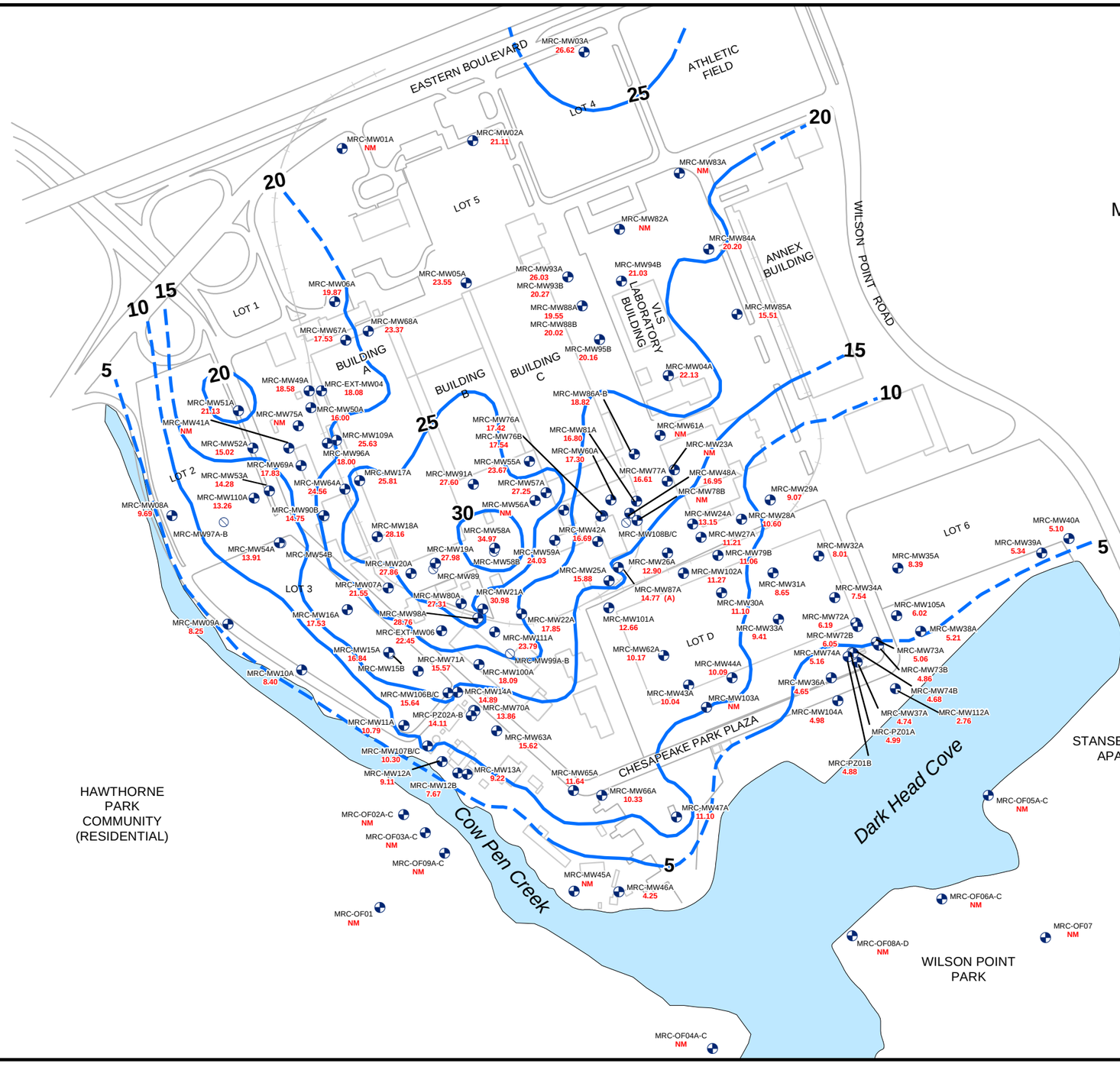

FIGURE 4-1

GROUNDWATER ELEVATION CONTOUR MAP-UPPER SURFICIAL AQUIFER, MARCH 2013

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL
- ABANDONED WELL BORING
- SURFACE WATER
- GROUNDWATER CONTOUR CONTOUR INTERVAL = 5 FEET
- INFERRED
- 15.23 GROUNDWATER ELEVATION FEET, NAVD, 1988
- NM NOT MEASURED

GROUNDWATER DATA FOR MARCH 12, 2013
NAVD = NORTH AMERICAN VERTICAL DATUM OF 1988

Lockheed Martin Middle River Complex
Middle River, Maryland

0 150 300 600 Feet

N

DATE MODIFIED: 8/6/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\Middle River GW Contours of Upper Surfacial Aquifer Mar2013.mxd)
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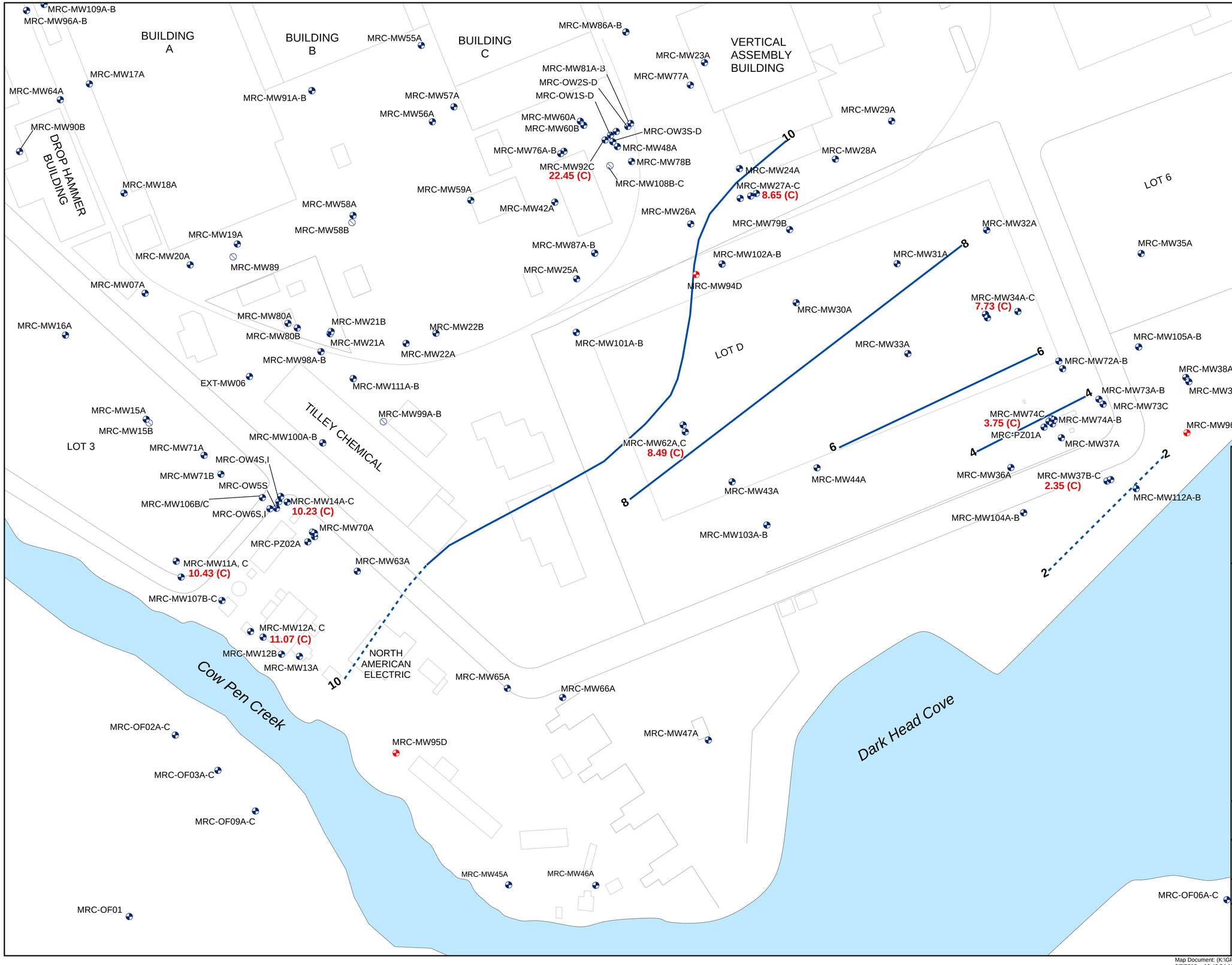

FIGURE 4-2

GROUNDWATER ELEVATION CONTOUR MAP - LOWER SURFICIAL AQUIFER, MARCH 2013

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL
- ABANDONED WELL BORING
- DEEP CONFINED AQUIFER GROUNDWATER MONITORING WELL
- SURFACE WATER
- GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 2 FEET
- INFERRED
- 9.64 — GROUNDWATER ELEVATION FEET, NAVD 1988
- (C) — INDICATES GROUNDWATER ELEVATION IS FOR THE C-LEVEL WELL IN THIS WELL CLUSTER

GROUNDWATER DATA FOR MARCH 12, 2013
NAVD = NORTH AMERICAN VERTICAL DATUM OF 1988

Lockheed Martin Middle River Complex
Middle River, Maryland

0 100 200 Feet

N

DATE MODIFIED: 8/7/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\Middle River GW Contours of Lower Surfacial Aquifer March2013.mxd)
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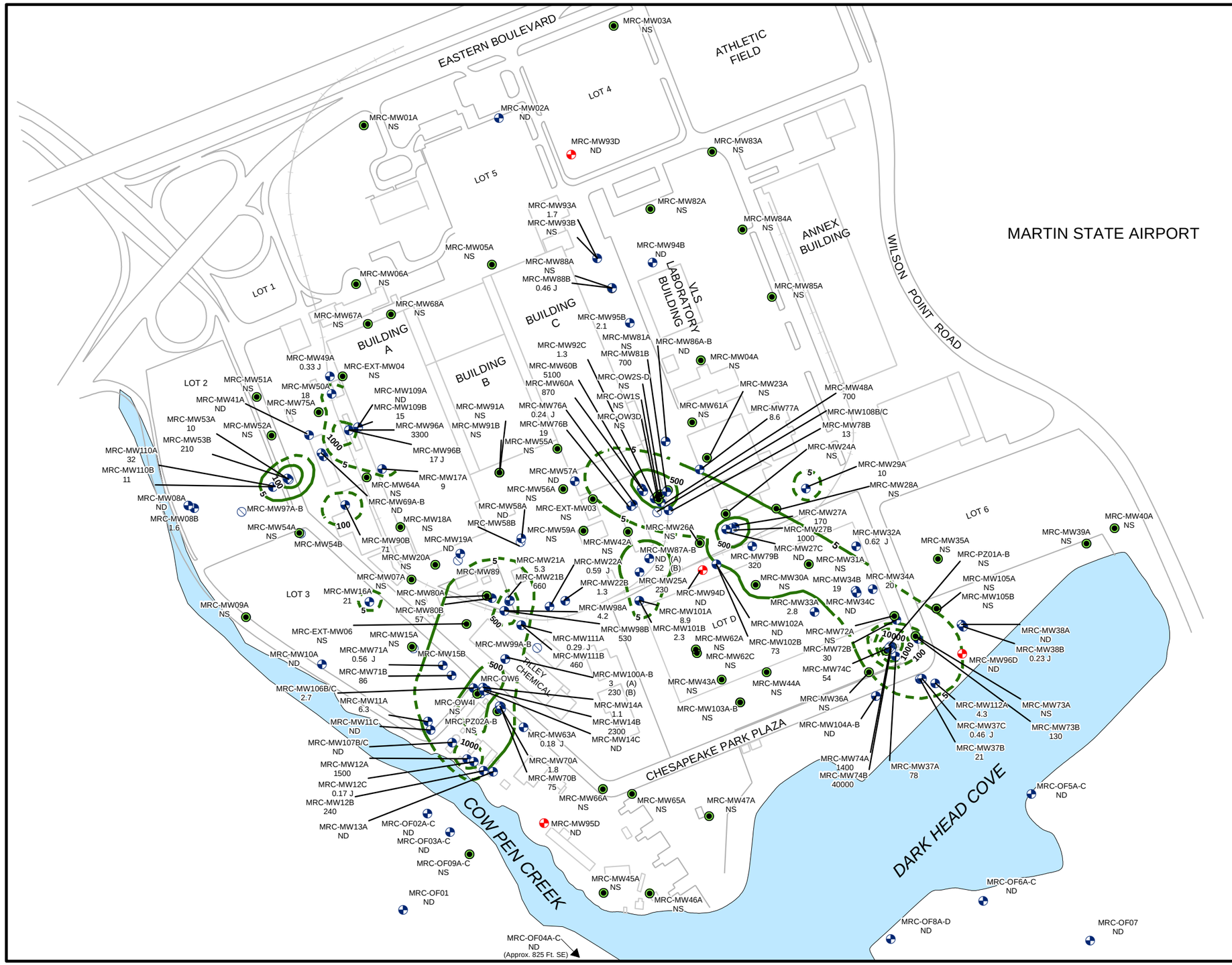

MARTIN STATE AIRPORT

FIGURE 4-3

DISTRIBUTION OF TCE IN GROUNDWATER, MARCH-MAY 2013

LEGEND

- GROUNDWATER MONITORING WELL SAMPLED
- DEEP CONFINED AQUIFER GROUNDWATER MONITORING WELL (SAMPLED)
- WELL NOT SAMPLED
- ABANDONED WELL BORING
- SURFACE WATER
- TCE ISOCONCENTRATION (UG/L)
- INFERRED

13 MAXIMUM CONCENTRATION IN WELL (UG/L)

UG/L MICROGRAMS PER LITER

ND NOT DETECTED

NS NOT SAMPLED

TCE= TRICHLOROETHENE
GROUNDWATER STANDARD FOR TCE IS 5 UG/L

Lockheed Martin Middle River Complex
Middle River, Maryland

0 125 250 500 Feet

N

DATE MODIFIED: 7/26/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\Middle River TCE Distribution in GW_March_May 2013.mxd)
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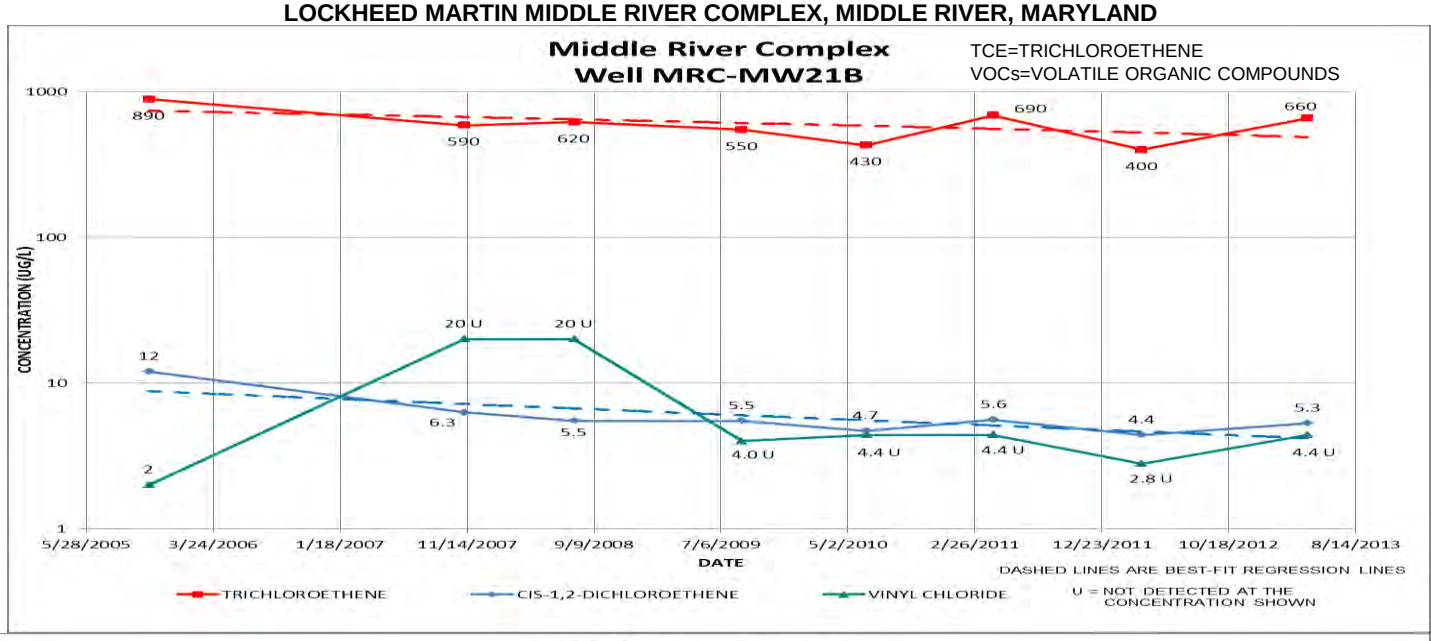
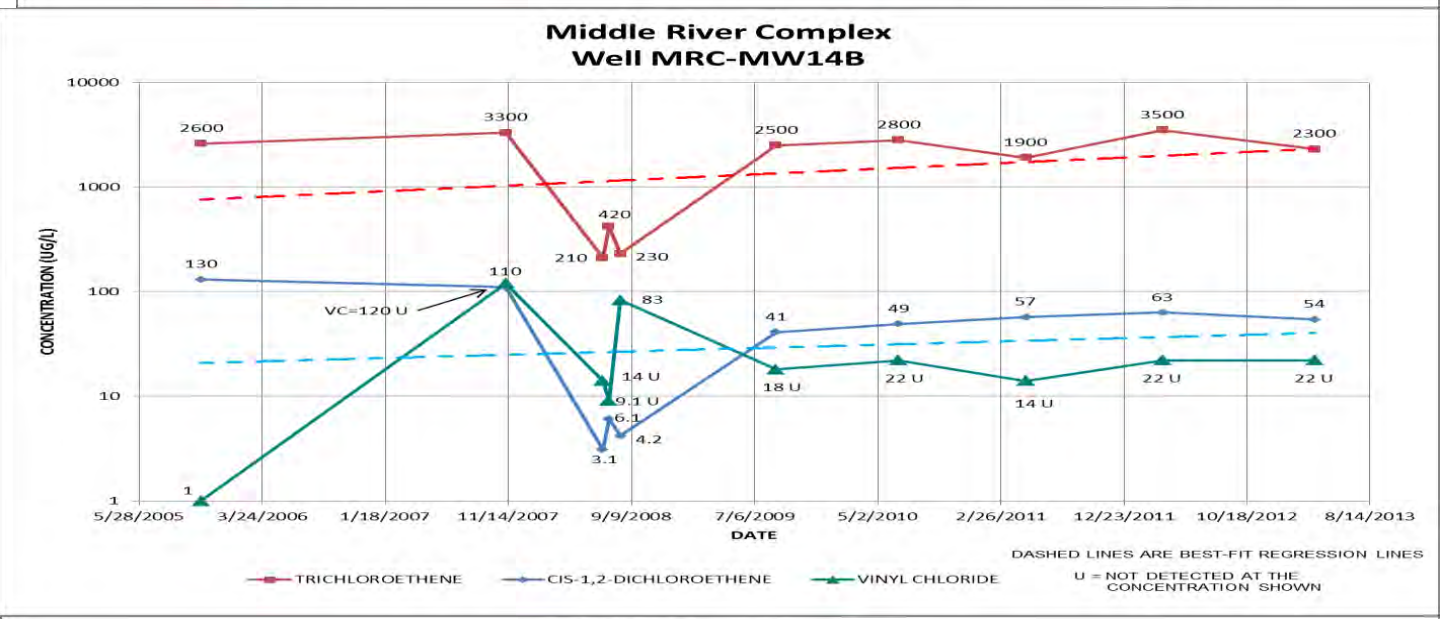
FIGURE 4-4

TIME-SERIES PLOTS OF MAJOR CHLORINATED VOCS – WESTERN TCE PLUME
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND





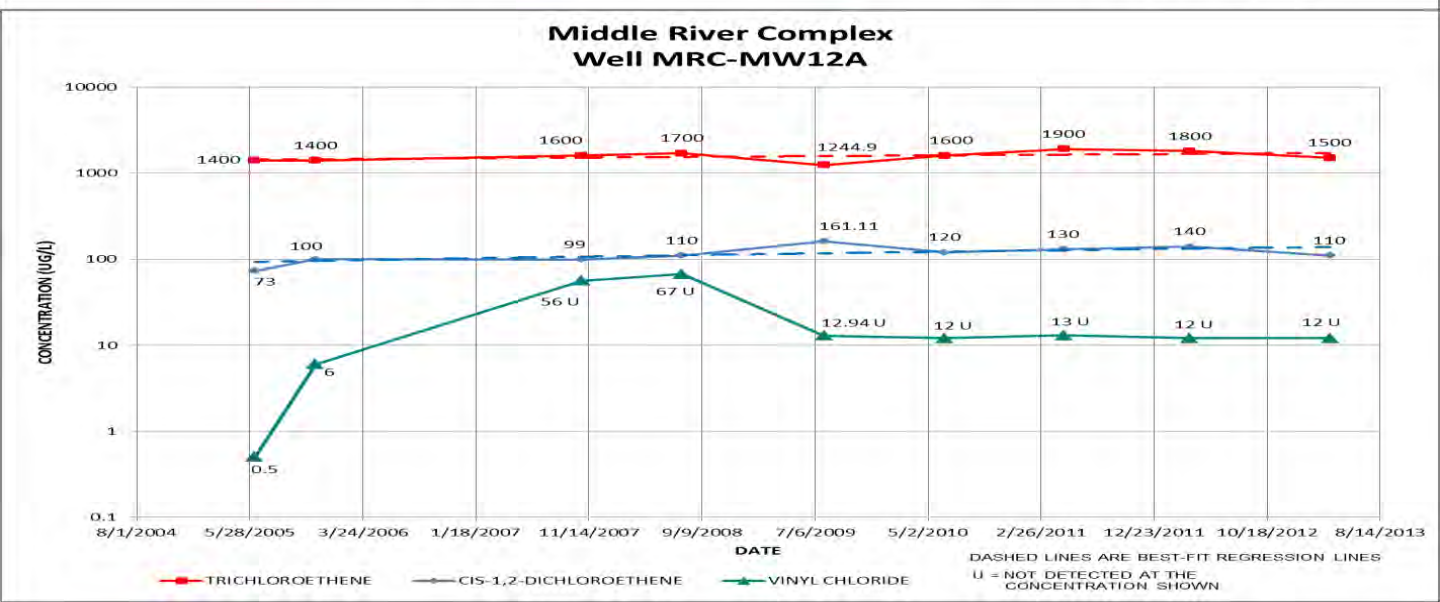
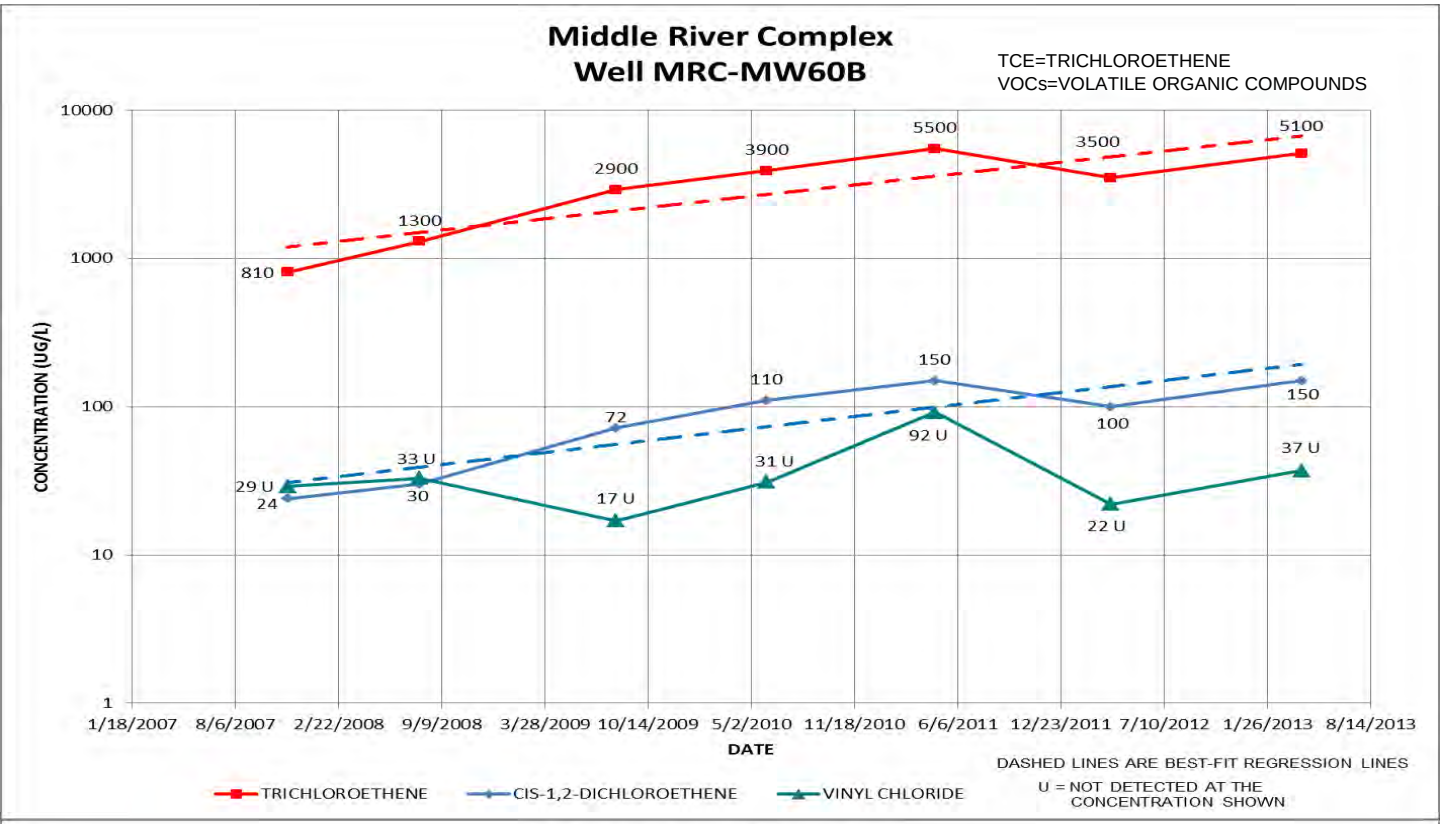


FIGURE 4-5

TIME-SERIES PLOTS OF MAJOR CHLORINATED VOCS – EASTERN TCE PLUME SOURCE AREA WELLS
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND



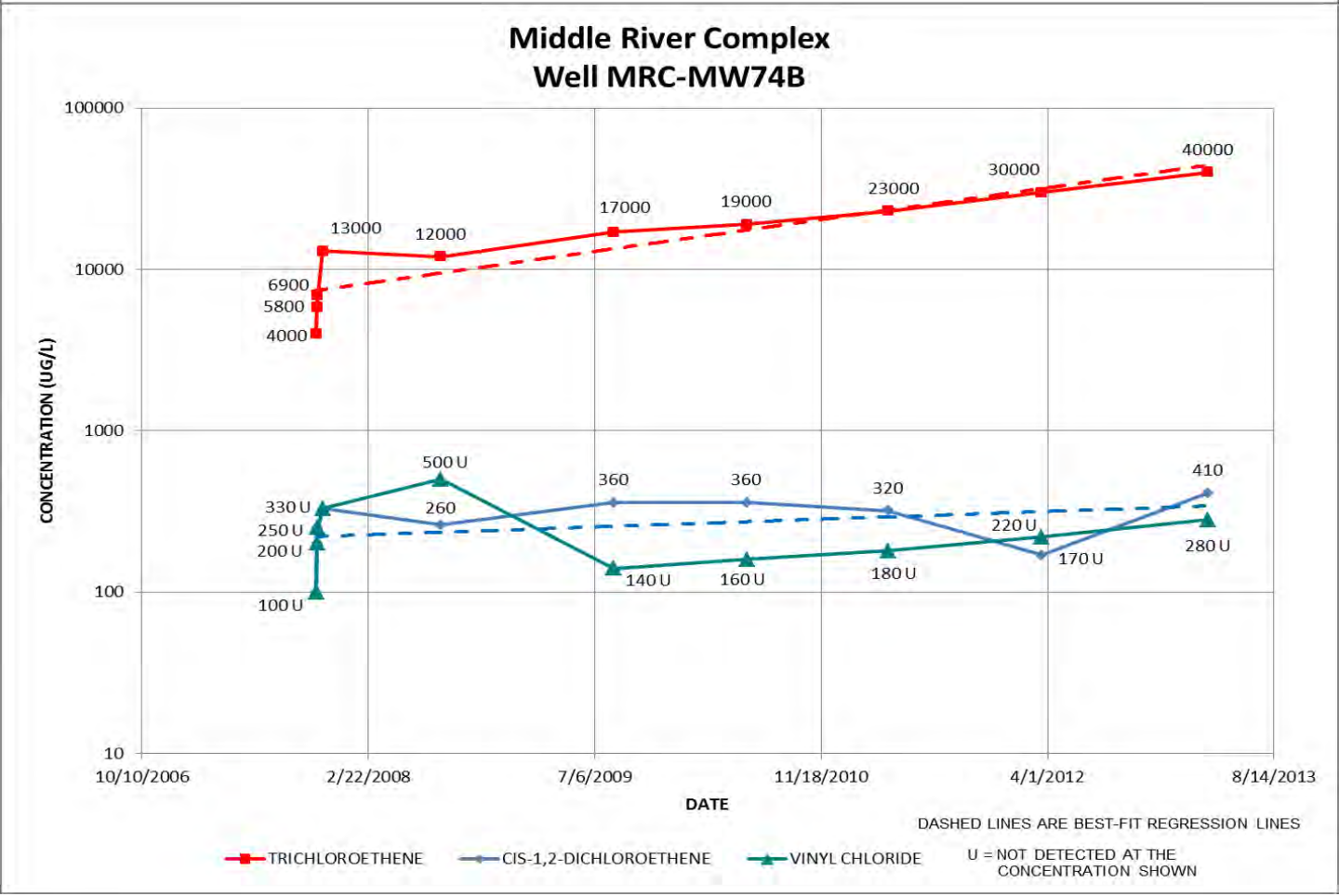
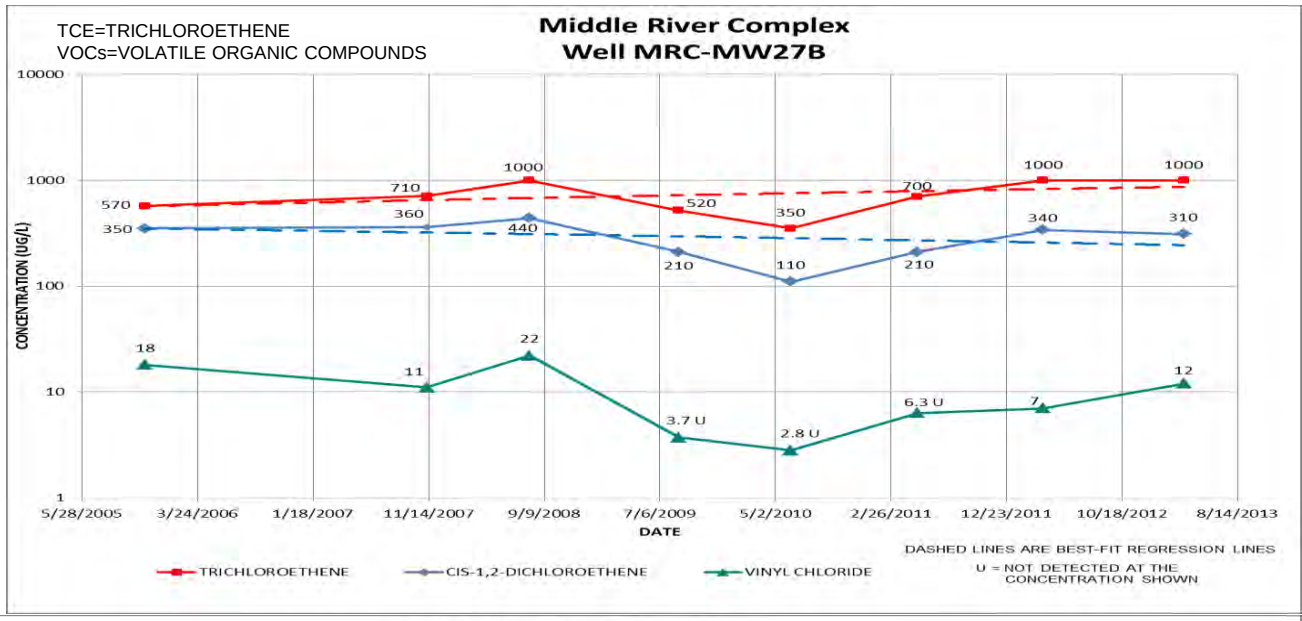
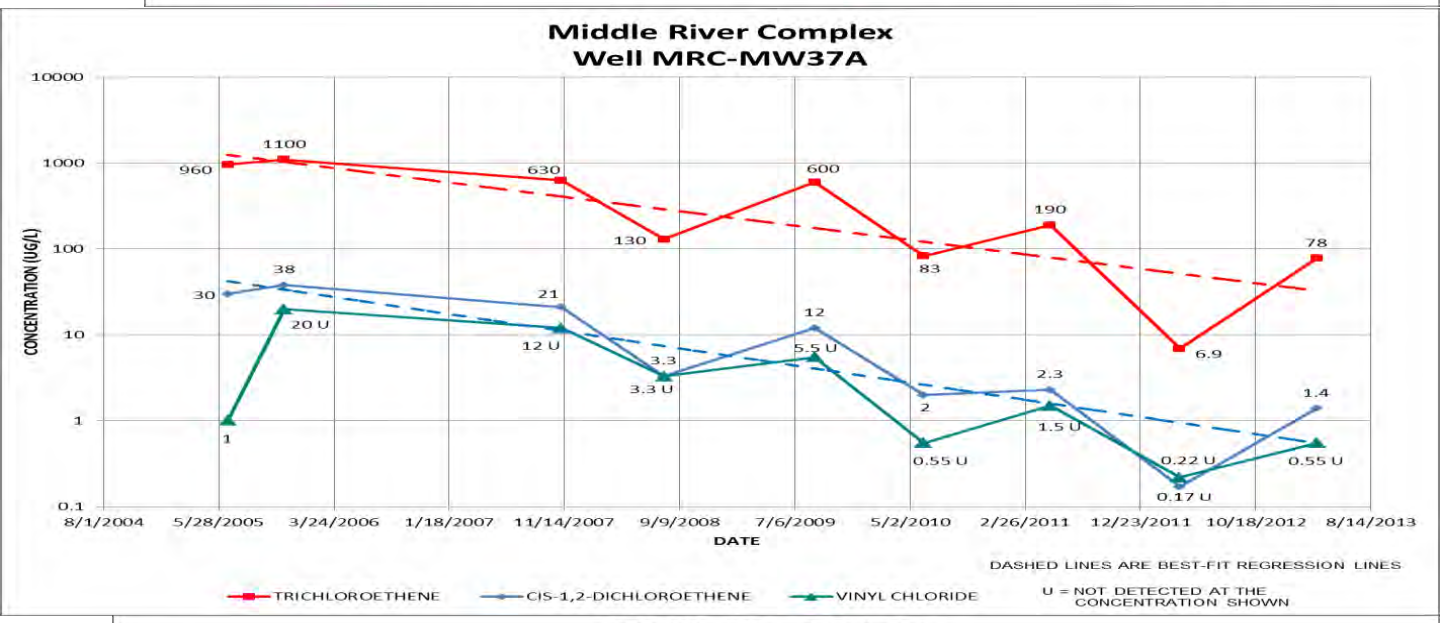
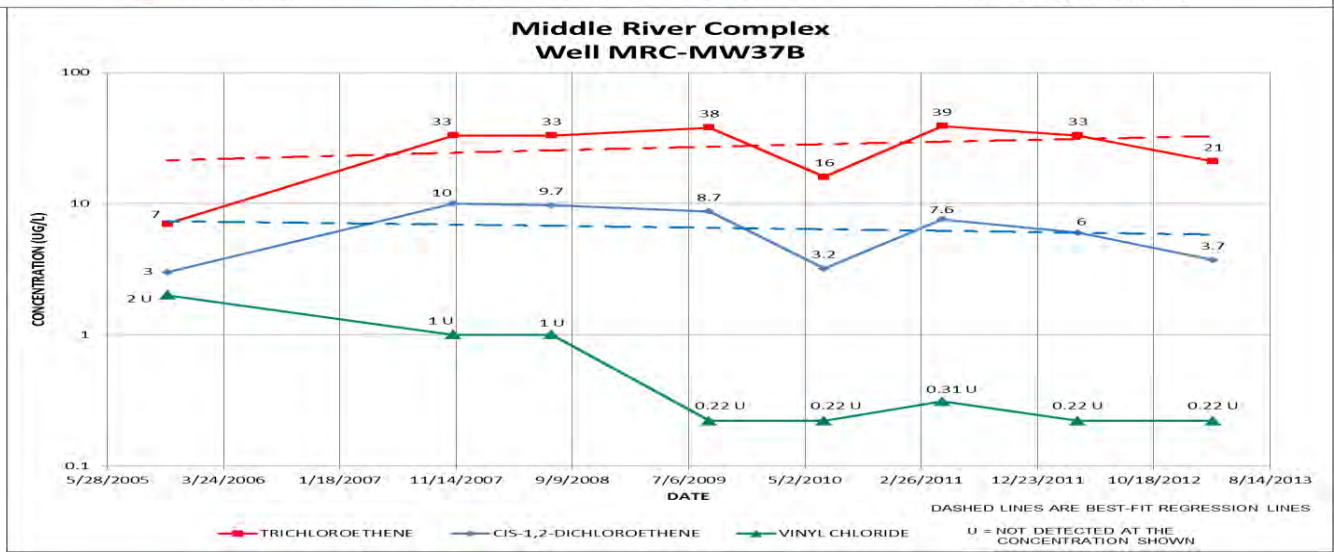


FIGURE 4-6

TIME-SERIES PLOTS OF MAJOR CHLORINATED VOCS – EASTERN TCE PLUME DOWNGRADIENT WELLS
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND







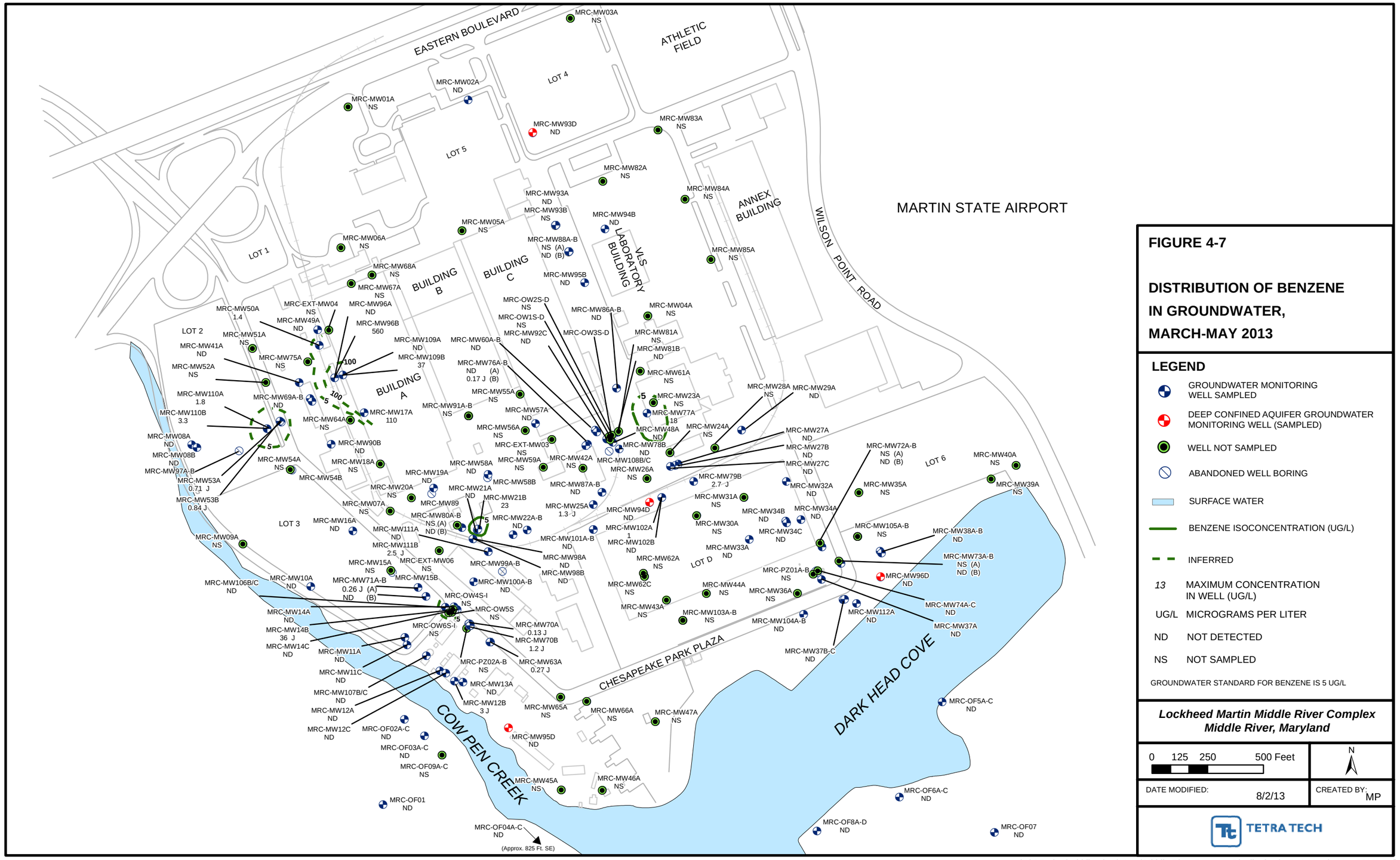


FIGURE 4-7

DISTRIBUTION OF BENZENE IN GROUNDWATER, MARCH-MAY 2013

LEGEND

- GROUNDWATER MONITORING WELL SAMPLED
- DEEP CONFINED AQUIFER GROUNDWATER MONITORING WELL (SAMPLED)
- WELL NOT SAMPLED
- ABANDONED WELL BORING
- SURFACE WATER
- BENZENE ISOCONCENTRATION (UG/L)
- INFERRED
- *13* MAXIMUM CONCENTRATION IN WELL (UG/L)
- UG/L MICROGRAMS PER LITER
- ND NOT DETECTED
- NS NOT SAMPLED

GROUNDWATER STANDARD FOR BENZENE IS 5 UG/L

Lockheed Martin Middle River Complex
Middle River, Maryland

0 125 250 500 Feet

N

DATE MODIFIED: 8/2/13

CREATED BY: MP

TETRA TECH

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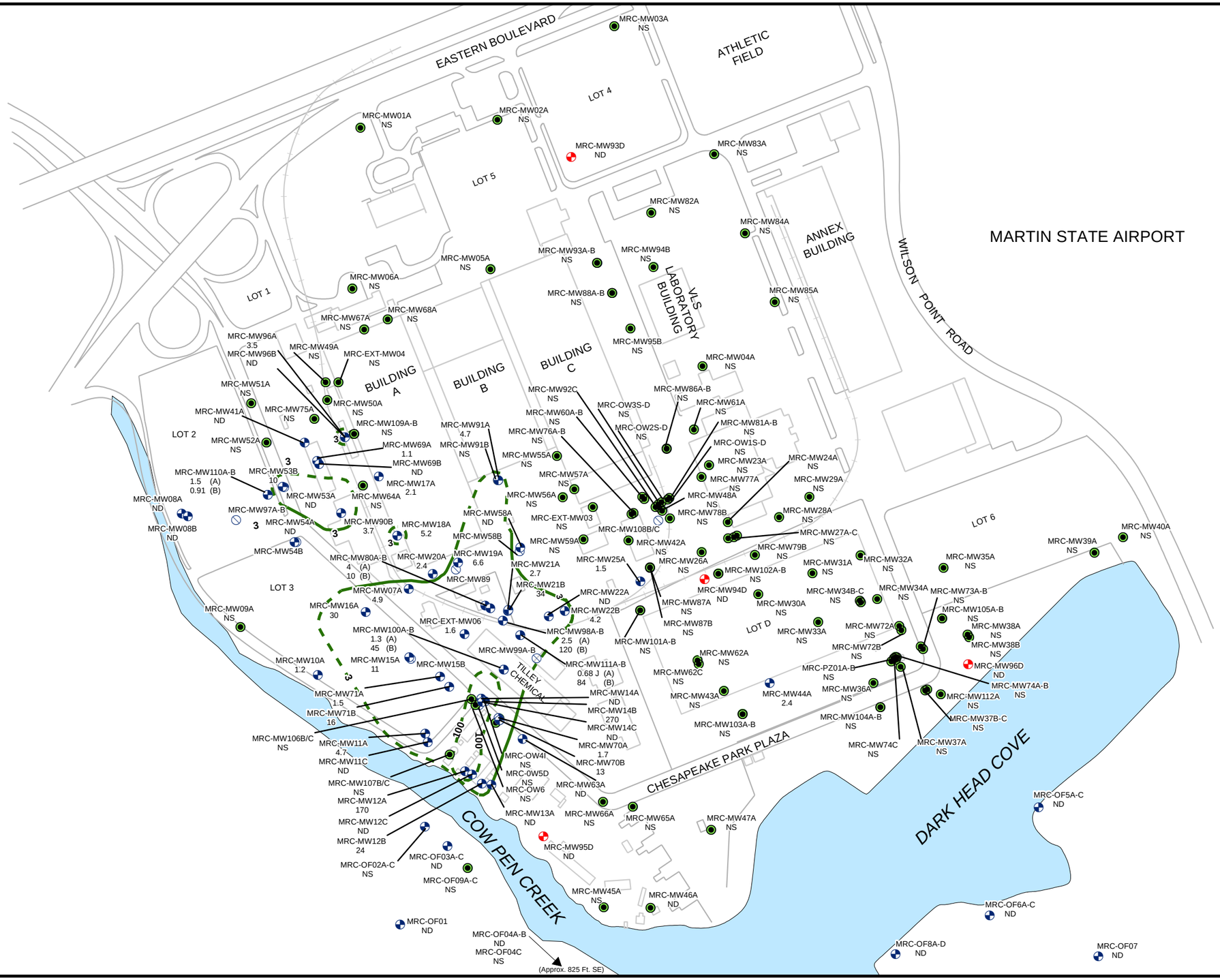

FIGURE 4-8

DISTRIBUTION OF 1,4 DIOXANE IN GROUNDWATER, MARCH-MAY 2013

LEGEND

- GROUNDWATER MONITORING WELL SAMPLED
- DEEP CONFINED AQUIFER GROUNDWATER MONITORING WELL (SAMPLED)
- WELL NOT SAMPLED
- ABANDONED WELL BORING
- SURFACE WATER
- 1,4 DIOXANE ISOCONCENTRATION (UG/L)
- INFERRED

13	MAXIMUM CONCENTRATION IN WELL (UG/L)
UG/L	MICROGRAMS PER LITER
ND	NOT DETECTED
NS	NOT SAMPLED

1,4-DIOXANE SCREENING CRITERION IS 3 UG/L

Lockheed Martin Middle River Complex
Middle River, Maryland

0 125 250 500 Feet

N

DATE MODIFIED: 8/2/13

CREATED BY: MP

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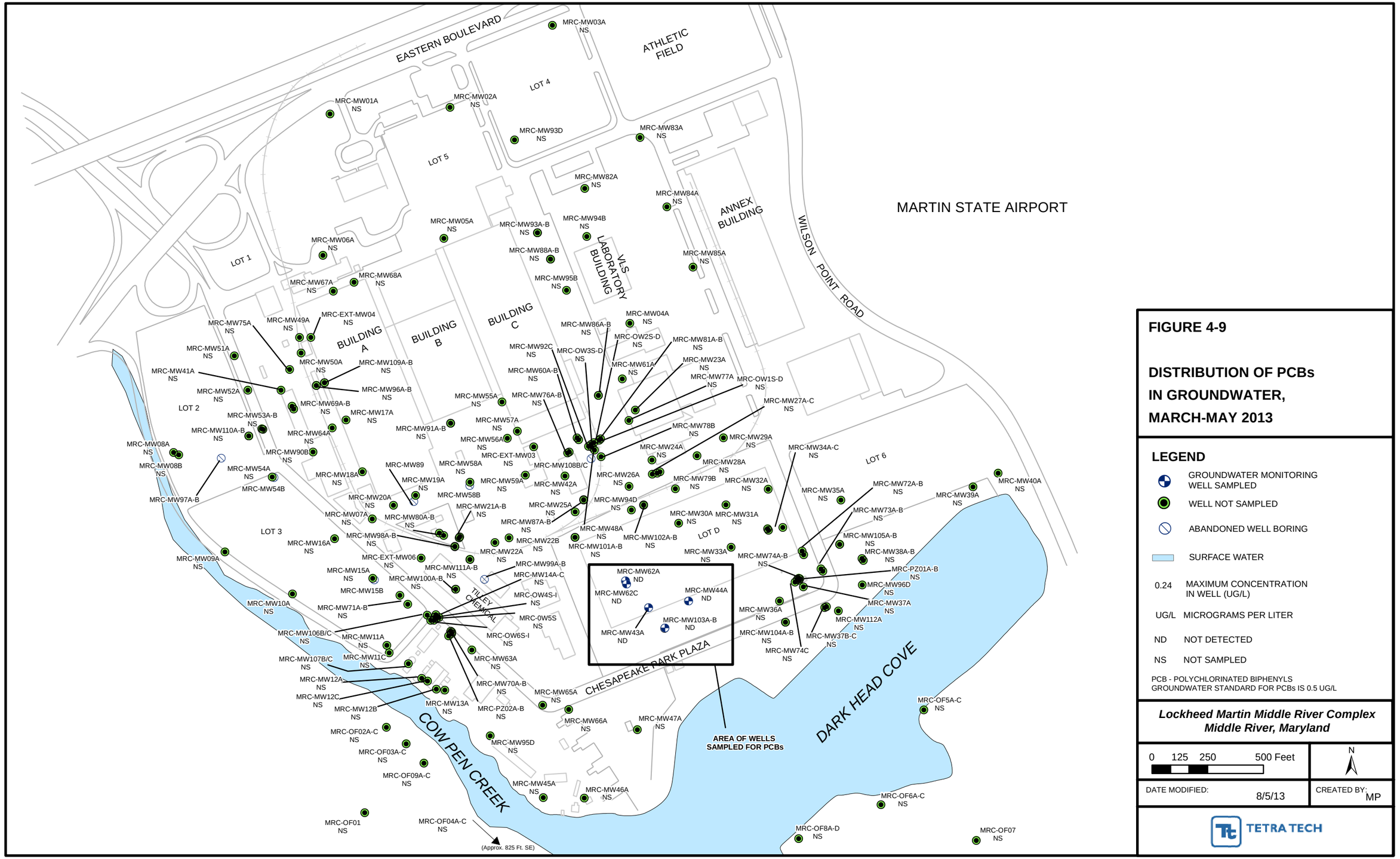

FIGURE 4-9

DISTRIBUTION OF PCBs IN GROUNDWATER, MARCH-MAY 2013

LEGEND

- GROUNDWATER MONITORING WELL SAMPLED
- WELL NOT SAMPLED
- ABANDONED WELL BORING
- SURFACE WATER
- 0.24 MAXIMUM CONCENTRATION IN WELL (UG/L)
- UG/L MICROGRAMS PER LITER
- ND NOT DETECTED
- NS NOT SAMPLED

PCB - POLYCHLORINATED BIPHENYLS
GROUNDWATER STANDARD FOR PCBs IS 0.5 UG/L

Lockheed Martin Middle River Complex
Middle River, Maryland

0 125 250 500 Feet

N

DATE MODIFIED: 8/5/13

CREATED BY: MP

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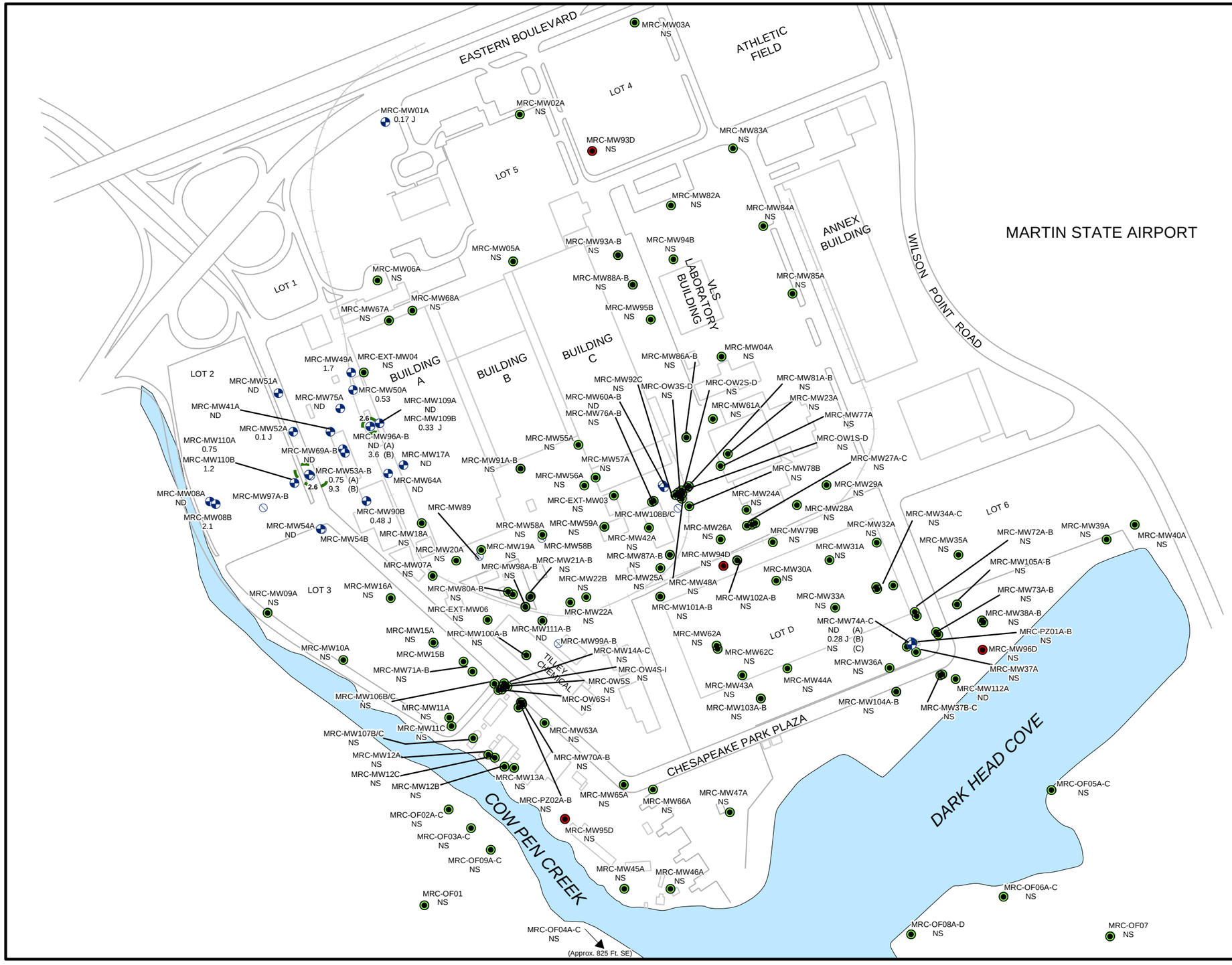

FIGURE 4-10

DISTRIBUTION OF PERCHLORATE IN GROUNDWATER, MARCH-MAY 2013

LEGEND

- GROUNDWATER MONITORING WELL SAMPLED
- DEEP CONFINED AQUIFER GROUNDWATER MONITORING WELL (NOT SAMPLED)
- WELL NOT SAMPLED
- ABANDONED WELL BORING
- SURFACE WATER
- PERCHLORATE ISOCONCENTRATION (UG/L)
- INFERRED
- 0.81 J — MAXIMUM CONCENTRATION IN WELL (UG/L)
- UG/L — MICROGRAMS PER LITER
- ND — NOT DETECTED
- NS — NOT SAMPLED

GROUNDWATER STANDARD FOR PERCHLORATE IS 2.6 UG/L

Lockheed Martin Middle River Complex
Middle River, Maryland

0 125 250 500 Feet

N

DATE MODIFIED: 8/5/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\Middle River Perchlorate Distribution in GW_March_May2013.mxd)
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Section 5
Summary

The findings of the March–May 2013 groundwater sampling and analyses and the March 2013 groundwater level measurements are summarized below:

- All wells were inspected during the 2013 sampling program to assess the need for repairs; 36 wells were repaired in 2013.

- Groundwater samples were collected from 158 monitoring wells in March–May 2013. Samples were analyzed for volatile organic compounds (VOCs), 1,4-dioxane, metals, perchlorate, polychlorinated biphenyls (PCBs), natural-attenuation assessment (NAA) parameters, and field water-quality parameters. A round of synoptic groundwater measurements was obtained from the wells on March 12, 2013.

- Groundwater flow in March 2013 is similar to that depicted by previous groundwater investigations. Shallow groundwater follows site topography and flows radially from the hydraulically upgradient northern portion of the Middle River Complex (MRC) at Eastern Boulevard and immediately south of Buildings A, B, and C to the southeast, south, and southwest toward Dark Head Cove and Cow Pen Creek. Groundwater in the deep surficial aquifer flows southeasterly from Eastern Boulevard toward Dark Head Cove. March 2013 surficial aquifer groundwater elevations were generally higher than those measured in 2012.

- Concentrations of chlorinated volatile organic compounds exceed Maryland groundwater standards at three main areas of the facility and at multiple depths. Trichloroethene (TCE), a common industrial solvent and metal degreaser, is the primary volatile organic compound exceeding the Maryland groundwater standard. Trichloroethene-degradation products, such as dichloroethenes (DCEs) and vinyl chloride (VC), also exceed Maryland groundwater standards at the facility, as does the fuel-related volatile organic compound benzene.

  These data confirm three trichloroethene and trichloroethene-degradation-product plumes: the *eastern trichloroethene plume* (originating south of Building C and the area of a former underground storage tank [UST], near the water tanks); the *western trichloroethene plume* (originating at a former underground storage tank site south of Building A); and a *smaller trichloroethene plume west of Building A*. The eastern and western trichloroethene plumes extend southeast and southwest, respectively, to areas adjacent to Dark Head Cove and Cow Pen Creek. Trichloroethene was also detected at several isolated locations in the western portion of the facility, south of the eastern trichloroethene plume, and north of the eastern trichloroethene plume.

- Concentrations of trichloroethene at source-area wells in the western trichloroethene plume have decreased slightly from the initial sampling period (2005–2007), but have remained steady (with fluctuations) over the subsequent monitoring period. Trichloroethene concentrations continue to increase at MW74B, a source-area well in the eastern trichloroethene plume. Trichloroethene at MW60B, a source-area well in the northern portion of the eastern trichloroethene plume, increased from 2007–2013, with a one-time decrease in 2011.

- Trichloroethene-degradation products were detected at 16 wells where groundwater samples were analyzed for natural attenuation assessment parameters. Results indicate that limited anaerobic reductive-dechlorination is occurring. Concentrations of vinyl chloride, ethene, methane, chloride, and elevated chloride at several well locations indicate that complete mineralization may be occurring in the hydraulically downgradient fringes of the plumes. However, relatively constant or increasing trichloroethene concentrations over the monitoring period, low or absent concentrations of lower-chain degradation products, and the poor subsurface conditions indicated by the natural attenuation assessment parameters suggest that slow or incomplete reductive mineralization of lower-order volatile organic compounds may be occurring in the volatile organic compound source-areas.

- The maximum trichloroethene concentration reported for the facility in the current round of sampling (40,000 micrograms per liter [µg/L]) was detected at intermediate surficial aquifer well MW74B; this concentration has increased compared to the maximum concentration detected in 2007 (13,000 micrograms per liter). MW74B is west of the water tanks in the southeastern portion of the property. The current round's maximum concentrations of trichloroethene reported in samples from wells MW74B (40,000 micrograms per liter) and MW60B (5,100 micrograms per liter) are detected in the intermediate portion of the surficial aquifer. The source(s) of this plume may be from spills of material handled near well MW74B, or from an underground storage tank containing trichloroethene (discovered in 2013 after the groundwater sampling at the southeastern edge of the former Building D foundation), or may originate from the south end of the Building C Basement (near MW60B).

- Benzene concentrations at three areas west and southwest of Building A (within the western trichloroethene plume and near the vertical-assembly building) exceed the state groundwater standard of five micrograms per liter. However, concentrations decline rapidly to levels below the standard at nearby downgradient wells. Some benzene concentrations detected in 2013 increased and others decreased, as compared to those measured in 2012. Increases were observed at four wells containing the maximum or near-maximum benzene concentrations. Benzene was not detected at several locations where it had been detected at low concentrations in 2005, confirming previous sampling results.

- The semivolatile organic compound (SVOC) 1,4-dioxane was primarily detected in groundwater samples from the upper and intermediate surficial-aquifer. 1,4-Dioxane is found primarily in the western trichloroethene plume, with levels ranging from 0.68 micrograms per liter at well MW111A (southeast of Building A) to 270 micrograms per liter at MW14B (in Tax Block G near a former sewerage treatment plant).

1,4-Dioxane is largely absent from the eastern trichloroethene plume, except for its detection at well MW44A (2.4 micrograms per liter) at a concentration below the California action level (3.0 micrograms per liter), which is used to screen the groundwater results. More extensive previous groundwater sampling rounds likewise do not appear to indicate that 1,4-dioxane was used or widely released to groundwater in the eastern portion of the Middle River Complex.

- Groundwater samples from six wells (MW43A, MW44A, MW62A, MW62C, MW103A, and MW103B) in the D-lot area of Block E (where elevated levels of polychlorinated biphenyls have previously been detected in soil) were analyzed for polychlorinated biphenyls. Polychlorinated biphenyls were not detected in the 2013 groundwater samples, which is consistent with the 2012 groundwater sampling results at these wells. A polychlorinated biphenyl was detected previously (in 2011) at a concentration of 0.24 micrograms per liter in well MW43A; this concentration is less than the groundwater standard of 0.5 micrograms per liter.

- Concentrations of 12 metals exceed Maryland groundwater standards in one or more groundwater samples. Concentrations of manganese, iron, and nickel exceed the standards most frequently, with the maximum concentrations of these three metals exceeding standards by more than a factor of 100. Concentrations of beryllium and vanadium exceed groundwater standards in 33% and 8% of samples, respectively, with maximum concentrations exceeding the standards by more than an order of magnitude (i.e., more than 10 times). Concentrations of the remaining metals (cadmium, zinc, antimony, barium, chromium, copper, and lead) exceed standards in no more than 3% of samples, with maximum concentrations less than seven times the standards.

- Perchlorate was detected in 13 of 27 groundwater samples (48%) analyzed for perchlorate. Detected concentrations range from 0.1*J* micrograms per liter (MW52A) to 9.3 micrograms per liter (MW53B); the latter concentration exceeds Maryland's groundwater standard of 2.6 micrograms per liter. Both of these wells are west of Building A, in parking lot 2. Of the 13 detected concentrations of perchlorate, only two concentrations (9.3 micrograms per liter at well MW53B and 3.6 micrograms per liter at well MW96B) exceed the groundwater standard (2.6 µg/L).

- Elevated concentrations of trichloroethene at well MW74B (12,000–70,000 µg/L over seven years) indicate the likely presence of dense non-aqueous phase liquids (i.e., residual solvent product) in the southeastern portion of the Middle River Complex. The subsequent discovery of a tank of waste solvent containing trichloroethene during soil pre-remediation in Tax Block E for the groundwater treatment facility area supports this theory. The tank contained full-strength trichloroethene and appeared to be leaking. Soil under the tank was impacted by trichloroethene. Soil that could easily be removed was removed before the excavation was stabilized. A soil delineation and removal program is being developed for implementation this year, preferably before completion and startup of groundwater remediation in that area.

- Major volatile organic compounds found in the Middle River Complex groundwater plumes (trichloroethene, *cis*-1,2-dichloroethene, vinyl chloride, and benzene) and 1,4-dioxane (found in the western TCE plume) were not detected in groundwater samples

analyzed for in 21 off-site wells. Single trace concentrations each of chloroform (well MRC-OF04A), 1,4-dichlorobenzene (well MRC-OF04C), and methyl *tert*-butyl ether (well MRC-OF01) were detected in off-site wells in this round. However, all VOC concentrations are less than state groundwater standards. Acetone was also detected in three samples; however, acetone is a common laboratory contaminant, and these results are considered artifacts of laboratory analyses.

Section 6
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APPENDIX A—GROUNDWATER LEVEL RECORD SHEETS

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: 2013 MRC GW Monitoring
Project No.: 112IC04795-02
Location: MRC
Personnel: S Cameron; W. Pryor
Weather Conditions: Raining 56°F
Measuring Device:
Tidally Influenced: Yes ___ No ___
Remarks: Steady rain w/ heavy spurts

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
32A	3/12/13	0953	3	3	3.00			
34B		0954			3.24			
34C		0955			3.07			
34A		0956			3.34			
72A		0957			4.93			
72B		0958			4.74			
73A		0959			5.40			
73B		1000			5.42			
37A		1001			5.76			
74B		1002			6.20			
74A		1003			6.02			
PZ-01A		1005			6.22			
PZ-01B		1004			6.35			
74C		1008			7.30			
36A		1010			5.07			
33A		1011			1.67			
31A		1012			2.35			
30A		1014			0.04			
62A		1016			0.45			
62C		1019			2.40			
43A		1024			0.97			
44A		1028			0.55			
29A		1032			4.90			
28A		1034			6.85			
27A		1035			9.55			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: 2013 MRC GW Monitoring **Project No.:** 112IC04795-02
Location: MRC **Personnel:** S. Cameron; W. Pryor
Weather Conditions: Raining 55°F **Measuring Device:**
Tidally Influenced: Yes ___ No ___ **Remarks:** Steady Rain

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
27B	3/18/13	1037			9.80			
27C	3/18/13	1038			12.70			
24A		1040			7.62			
26A		1041			10.00			
77A		1042			6.95			
85A		1050			3.15			
84A		1054			0.00			
94B		1055			4.25			
04A		1058			2.30			
86A		1102			4.80			
86B		1103			4.82			
87A		1104			11.80			
87B		1105			7.42			
48A ~~34A~~ (FJK)		1107			7.81			
81A		1108			10.54			
81B		1110			7.04			
92C		1111			2.86			
60B		1112			12.93			
60A		1113			13.96			
76A ~~73A~~ (FJK)		1114			11.00			
76B ~~73B~~ (FJK)		1115			10.70			
42A ~~43A~~ (FJK)		1116			11.52			
25A		1117			10.83			
~~59A~~		1119			10.08			
57A		1121			9.21			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: 2013 MRC GW Monitoring **Project No.:** NRICU4795-02
Location: MRC **Personnel:** S. Cameron; W. Prow
Weather Conditions: Raining 56°F **Measuring Device:**
Tidally Influenced: Yes ___ No ___ **Remarks:** Steady Rain

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
55A	3-12-13	1126			12.89			
91A		1127			9.25			
91B		1128			20.86			
58A ~~54A~~ BJK		1133			0.06			
22A		1134			13.73			
22B		1137			-.24			
21A		1140			1.72			
21B		1139			9.48			
80A		1141			5.51			
80B		~~1140~~						Under Water
19A		1143			8.38			
20A		1145			8.32			
07A		1147			11.84			
18A		1148			4.30			
17A		1150			6.78			
64A		1151			6.32			
90B		1152			6.92			
96A		1153			12.87			
96B		1154			15.91			
109A		1205			5.59			
109B		1204		47.70	16.62			
50A		1206			14.15			
49A		1208			12.89			
67A		1209			19.14			
68A		1210			13.14			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: 2013 MRC GW Monitoring **Project No.:** 112IC04795-02
Location: MRC **Personnel:** S Cameron ; W. Pipp
Weather Conditions: Raining until lunch @ 1230 **Measuring Device:**
Tidally Influenced: Yes ___ No ___ **Remarks:** Rain stops @ 1230

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
100A	3/12/13	1214			9.73			
100B		1215			10.19			
111A		1218			7.62			
111B		1219			13.43			
98A		1223			3.12			
98B		1224			9.64			
35A		1348			0.00			Rain Stopped
40A		1351			-0.60			
69A		1405			0.01			
10A		1407			1.12			
11C		1430			1.02			
8B		1445			-3.00			
8A		1450			0.01			
53A		1453			4.26			
53B		1455			4.75			
110B		1456			2.50			
110A		1457			2.95			Missing lid
52A		1459			5.30			
51A		1500			0.75			
69A		1504			9.80			
69B		1506			-0.34			
6A		1512			11.95			
3A		1516			1.55			
2A		1521			7.30			
5A		1524			11.60			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: 2013 MRC GW Monitoring **Project No.:** 112I C04795 -02
Location: MRC **Personnel:** S. Greene; W Pryor
Weather Conditions: Clear Windy, 56° F **Measuring Device:**
Tidally Influenced: Yes ___ No ___ **Remarks:**

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
105A	3/18/13	1529			3.64			
105B		1530			3.83			
38A		1532			2.86			
38B		1533			3.50			
39A		1542			-0.56			
112A		1545			2.20			
96D		1546			-5.34			
37C		1552			5.10			
37B		1553			4.07			
104A		1554			3.21			
109B		1555			4.05			
95B		1603			3.88			
88A		1605			4.92			
88B		1606			4.38			
93A		1607			6.02			
93B		1608			11.70			
EXT 04		1612			16.19			
EXT 06		1615			9.18			
71B		1618			3.72			
71A		1619			1.35			
11A		1621			6.11			
54A		1623			3.14			
16A		1626			-0.33			
15A		1628			-0.04			
13A		1634			1.09			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: 2013 MRL GW Monitoring **Project No.:** 112C04745-02
Location: MRL **Personnel:** S. Greene; W. Pryor
Weather Conditions: windy 56°F **Measuring Device:**
Tidally Influenced: Yes ___ No ___ **Remarks:**

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
12B	3/12/13	1635			1.89			
12C		1636			-1.24			
12A		1637			0.18			
L07B/C		1638			0.03			
14A		1640			1.78			
14C		1641			5.65			
14B		1642			3.97			
70A		1643			0.83			
PZ02A		1644			0.54			
70B		1645			2.89			
PZ02B		1646			1.74			
63A		1647			0.58			
106 B/C		1648			0.56			
65A		1654			3.12			
66A		1655			4.66			
47A		1658			-0.35			
46A		1700			2.15			Staff Gage @ + 3.45 mark
950		1703			-0.32			
93D		1717			8.51			
94D		1723			8.03			
79B		1724			8.62			
101A		1726			14.63			
101B		1727			12.94			
102A		1730			10.36			
102B		1731			11.81			

* All measurements to the nearest 0.01 foot

APPENDIX B—MONITORING WELL PURGING AND SAMPLING RECORDS

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795.02

Sample ID No.: MRC-OF-010-050813
Sample Location: OF-010
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 5-8-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1300	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	7.21	0.165	22.38	0.3	0.54	0.1	301

PURGE DATA:

Date: 5-8-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 7.02			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1209								
End Purge (hrs): 1255								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

Will R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IE04795-02

WELL ID.: MRC-OF-018-050813
DATE: 5-8-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1209	7.00	300	—	—	—	—	—	—	—	Initial, no odor
1210	7.74	300	2.59	0.185	20.9	1.19	22.44	257	0.1	Slightly cloudy
1215	8.35	250	2.61	0.185	11.0	0.99	22.25	261	0.1	↓
1220	8.52	200	2.52	0.184	9.7	0.83	21.98	273	0.1	Clear water
1230	8.75	150	2.34	0.181	0.5	0.63	21.95	291	0.1	↓
1240	8.90	100	2.24	0.176	0.9	0.57	22.12	299	0.1	
1245	8.90	100	2.23	0.171	0.3	0.55	22.26	299	0.1	
1250	8.90	100	2.21	0.169	0.3	0.54	22.34	301	0.1	
1255	8.90	100	2.21	0.169	0.3	0.54	22.38	301	0.1	

Well Parameters Stabilized

Sampling Begins

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-OF-02A-050613
Sample Location: OF-02A
Sampled By: MD
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-6-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1231	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	2.92	0.165	15.07	0.0	0.96	0.0	231

PURGE DATA:

Date: 5-6-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type:			See	low	flow	purge		
Total Well Depth (TD): 25-40								
Static Water Level (WL):				Data	Sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 1155								
End Purge (hrs): 1226								
Total Purge Time (min): 31								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-OF-02A-050613
DATE: 5-6-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1155		100	—	—	—	—	—	—	—	Initial, no odor
1156		100	2.52	0.074	3.6	2.65	15.11	238	0.0	Clear water
1201		100	2.73	0.119	0.0	0.96	15.15	230	0.0	
1206		100	2.74	0.120	0.0	0.94	15.16	230	0.0	
1211		100	2.80	0.118	0.0	0.88	15.12	231	0.0	
1216		100	2.87	0.116	0.0	0.95	15.12	230	0.0	
1221		100	2.91	0.114	0.0	0.96	15.08	231	0.0	
1226		100	2.92	0.115	0.0	0.96	15.07	231	0.0	
			WLN parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Walt Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112EC04795-02

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

Sample ID No.: MRC-OF-02B-050613
Sample Location: OF-02B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-6-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1144								
Method: Peristaltic pump	clear	7.86	0.068	15.33	1.2	1.17	0.0	ORP 194

PURGE DATA:

Date: 5-6-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0-5								
Well Casing Diameter & Material Type:		See flow through purge data sheet						
Total Well Depth (TD): 43.50								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1108								
End Purge (hrs): 1139								
Total Purge Time (min): 31								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3- 40 ml vials	✓
1,4 Dioxane	—	2- 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IL047785-02

WELL ID.: MMC-OF-02B-050613
DATE: 5-6-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1108		100	—	—	—	—	—	—	—	
1109		100	2.02	0.041	8.4	1.98	15.37	282	0.0	Initial purge water clear
1114		100	2.08	0.044	9.7	1.60	15.38	237	0.0	
1119		100	2.50	0.054	7.3	1.35	15.38	199	0.0	
1124		100	2.66	0.059	4.8	1.25	15.36	198	0.0	
1129		100	2.76	0.066	1.3	1.21	15.36	197	0.0	
1134		100	2.80	0.067	1.2	1.19	15.30	197	0.0	
1139		100	2.86	0.068	1.2	1.17	15.33	194	0.0	
			Field parameters stabilize							
				Sampling Begins						

SIGNATURE(S): Matt Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-OF-02C-050513
Sample Location: OF-02C
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5-6-13								
Time: 1053								
Method: Peristaltic pump	Clear	2.75	0.021	15.44	0.0	6.43	0.0	ORP 377

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-6-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:		See Low Flow Purge Data Sheet						
Total Well Depth (TD): 67.35								
Static Water Level (WL): 57.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1017								
End Purge (hrs): 1048								
Total Purge Time (min): 31								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pa

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-OF-02C-050613
DATE: 5-6-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1017	5.30	100	—	—	—	—	—	—	—	Initial, no odor
1018		100	2.90	0.040	6.1	3.92	16.51	363	0.0	Clear Water
1023		100	2.43	0.026	0.0	5.18	16.41	330	0.0	
1028		100	2.51	0.022	0.0	6.16	16.02	346	0.0	
1033		100	2.60	0.021	0.0	6.33	15.64	362	0.0	
1038		100	2.67	0.021	0.0	6.32	15.46	321	0.0	
1043		100	2.71	0.021	0.0	6.40	15.13	375	0.0	
1048		100	2.75	0.021	0.0	6.43	15.00	377	0.0	
				Well parameters Stabilize						
				Sampling Begins						

SIGNATURE(S): Walt Pac

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112FC04795.02

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

Sample ID No.: MRC-OF-03A-050713
Sample Location: OF-03A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-7-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1057	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	3.10	0.446	15.27	0.0	2.73	0.0	379

PURGE DATA:

Date: 5-7-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:			See Low Flow Purge Data Sheet					
Total Well Depth (TD): 25.30								
Static Water Level (WL): Top of PVC								
One Casing Volume(gal/L):								
Start Purge (hrs): 1020								
End Purge (hrs): 1052								
Total Purge Time (min): 32								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
1,4 Dioxane	—	2 - 1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-OF-03A-050713
DATE: 5-7-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1020	~~Top of Pump~~	100	—	—	—	—	—	—	—	Initial, moderate
1022		100	2.31	0.057	11.1	3.17	17.53	434	0.0	Slightly Cloudy
1027		100	2.55	0.035	5.8	2.91	17.27	410	0.0	Clear water
1032		100	2.73	0.045	0.0	2.68	16.77	411	0.0	
1037		100	2.77	0.048	0.0	2.63	16.31	392	0.0	
1042		100	3.06	0.047	0.0	2.74	15.94	386	0.0	
1047		100	3.04	0.047	0.0	2.81	15.25	381	0.0	
1052		100	3.10	0.046	0.0	2.73	15.27	379	0.0	
				Well Parameters Stabilized						
				Sampling Begins						

SIGNATURE(S): Matt R

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

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

Sample ID No.: MRC-OF-03B-050713
Sample Location: OF-03B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-7-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1146	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	2.93	0.040	15.21	0.0	3.45	0.0	396

PURGE DATA:

Date: 5-7-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:			See low flow purge Data Sheet					
Total Well Depth (TD): 43.30								
Static Water Level (WL): Top of PVC								
One Casing Volume(gal/L):								
Start Purge (hrs): 1109								
End Purge (hrs): 1141								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

43.30

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-OF-03B-050713
DATE: 5-7-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1109	Top of PVC	100	—	—	—	—	—	—	—	Initial pH odor Clear water
1111		100	3.45	0.022	4.4	4.42	15.12	376	0.0	
1116		100	3.10	0.028	6.9	3.16	15.07	392	0.0	
1121		100	2.97	0.036	0.2	3.20	15.16	395	0.0	
1126		100	2.89	0.041	0.0	3.06	15.30	397	0.0	
1131		100	2.91	0.041	0.0	3.42	15.28	396	0.0	
1136		100	2.93	0.040	0.0	3.39	15.23	395	0.0	
1141		100	2.93	0.040	0.0	3.45	15.21	380	0.0	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Walt R

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

Sample ID No.: MRC-OF-03c-050713
Sample Location: OF-03c
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 5-7-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1244	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	2.69	0.026	15.57	4.3	4.50	0.0	328

PURGE DATA:

Date: 5-7-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:			SEE	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): Top of Casing				Depth	sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 1207								
End Purge (hrs): 1239								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
1,4 Dioxane	—	2 - 1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt R

66.20

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112G04785-02

WELL ID.: MRC-OF-03C-050713
DATE: 5-7-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1207	Top of PVC	100	—	—	—	—	—	—	—	Initial, no odor
1209		100	3.43	0.020	8.1	7.00	15.21	367	0.0	Clear Water
1214			3.04	0.020	21.3	5.07	15.38	384	0.0	
1219			2.94	0.020	15.7	5.06	15.45	388	0.0	
1224			2.83	0.020	12.9	4.89	15.48	392	0.0	
1229			2.71	0.020	4.5	4.50	15.54	397	0.0	
1234			2.70	0.020	4.0	4.45	15.55	397	0.0	
1239			2.69	0.020	4.3	4.52	15.57	398	0.0	
				Well Parameters Stabilize →						
				Sampling Begins →						

SIGNATURE(S): Walt B

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112-117795

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

Sample ID No.: MRC-OF04A-050713
Sample Location: OF04A
Sampled By: S. Green
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date:	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1000	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	4.24	0.390	15.70	9.74	0.00	—	238

PURGE DATA:

Date: 5/7/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow Purge Data Sheet					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: ¼"								
Total Well Depth (TD): 24.58								
Static Water Level (WL): 10.37								
One Casing Volume(gal/L):								
Start Purge (hrs): 0925								
End Purge (hrs): 1015								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 1gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	3x HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers (only 1 Filled)	✓

OBSERVATIONS / NOTES:

well went dry after filling first Amber for 1,4-Dioxane Analysis

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

AC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112G04795
WELL ID.: MRC-OF04A-050713
DATE: 5/7/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0925	10.37	—	—	—	—	—	—	—	—	
0930	—	150	4.04	0.443	29	0.00	17.87	197	—	
0935	—	150	4.08	0.428	39.1	0.00	17.34	201	—	
0940	—	150	4.11	0.410	36.7	0.00	17.04	216	—	
0945	—	150	4.18	0.398	29.3	0.00	16.63	220	—	
0950	—	150	4.24	0.392	25.1	0.00	16.11	225	—	
0955	—	150	4.24	0.350	16.2	0.00	15.84	234	—	
1000	—	150	4.24	0.390	9.74	0.00	15.70	238	—	
Sampling for VOCs + 1,4-Dioxane										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112I604795

Sample ID No.: MRC-OF04B-050713
Sample Location: OF04B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 5/7/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1300								
Method: Peri Pump	Cloudy	5.39	0.184	15.19	649	0.00	—	70

PURGE DATA:

Date: 5/7/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 1/4"			Purge Data Sheet					
Total Well Depth (TD): 37.54								
Static Water Level (WL): 10.86								
One Casing Volume(gal/L):								
Start Purge (hrs): 1025								
End Purge (hrs): 1035								
Total Purge Time (min): 10 min								
Total Vol. Purged (gal/L): 0.1 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	

OBSERVATIONS / NOTES:

Well purged dry at 1035
Returned to sample VOCs: 5/7/13 @ 1300

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MKC
PROJECT NUMBER: 112I604795

WELL ID.: MKC-OF04B-050713
DATE: 5/7/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1025	10.86	—	—	—	—	—	—	—	—	
1030	—	150	5.39	0.187	649	0.00	15.19	70	—	
1035	Well Dry									
Returned to sample WX1 @ 1340 on 5/7/13										

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MKL
Project No.: 112I04795

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

Sample ID No.: MKL-OF04C-050713
Sample Location: OF04C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1230								
Method: Peri Pump								

PURGE DATA:

Date: 5/7/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 1/2"								
Total Well Depth (TD): 67.51			Purge Data Sheet					
Static Water Level (WL): 7.62								
One Casing Volume(gal/L):								
Start Purge (hrs): 1055								
End Purge (hrs): 1115								
Total Purge Time (min): 20								
Total Vol. Purged (gal/L): 0.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL VOA's	✓
1,4-Dioxane	—	2-1L Amber (Only 1 collected)	✓

OBSERVATIONS / NOTES:

Well purged dry @ 1117. Returned to sample at 1230. Filled 3 VOC vials and one Amber

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 1D1C0479S
WELL ID.: MRC-OF04C-050713
DATE: 5/7/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1055	7.62	—	—	—	—	—	—	—	—	
1100	—	150	5.75	0.080	46.1	0.00	14.79	78	—	
1105	—	150	5.58	0.074	38.2	0.00	14.75	73	—	
1110	—	150	5.58	0.075	27.7	0.00	14.77	71	—	
1115	—	150	5.55	0.074	20.8	0.00	14.78	72	—	
1117	Well Dry									
Return to Site at		1230. Collected 3		VOC vials	+	1,4-Dioxane Amber glass				

SIGNATURE(S): aC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112Fe04785-02

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

Sample ID No.: MRC-OF-05A-050213
Sample Location: OF-05A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-2-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1206								
Method: Peristaltic pump	Slight	4.29	0.665	15.41	47.5	0.91	0.3	38

PURGE DATA:

Date: 5-2-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:			See	low	flow	purge		
Total Well Depth (TD): 23.45								
Static Water Level (WL): 7.15			Data		Sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 1130								
End Purge (hrs): 1206								
Total Purge Time (min): 36								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04785-02

WELL ID.: MRC-OF-05A-050213
DATE: 5-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1130	2.15	100	—	—	—	—	—	—	—	Initial, no odor
1131		100	1.56	0.556	314	2.23	16.64	381	0.3	cloudy water
1136		100	2.12	0.565	168	1.57	15.39	200	0.3	↓
1141		100	3.06	0.570	134	1.37	15.40	127	0.3	↓
1146		100	3.61	0.607	84.6	1.13	15.26	96	0.3	↓
1151		100	3.84	0.612	60.0	1.03	15.40	67	0.3	Slightly cloudy
1156		100	4.20	0.605	48.3	0.93	15.54	48	0.3	↓
1201		100	4.26	0.603	46.0	0.92	15.66	43	0.3	↓
1206		100	4.29	0.605	47.5	0.91	15.41	38	0.3	↓
				Well parameter stabilized						
				Sampling Begins						

SIGNATURE(S): Walt Pz

PAGE 2 OF 2

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112G04795-02

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

Sample ID No.: MRC-OF-05B-050213
Sample Location: OF-05B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-2-13 / Time: 1236 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
	Cloudy	3.99	6.404	14.76	429	1.53	0.2	ORP 57

PURGE DATA:

Date: 5-2-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:			See Low flow purge					
Total Well Depth (TD): 38.70								
Static Water Level (WL): 1.65			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1231								
Total Purge Time (min): 11								
Total Vol. Purged (gal/L): 0.15								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
~~MS/MSD~~	

Signature(s):

Matt Re

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-OF-05B-050213
DATE: 5-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	~~1.65~~ 1.65	100	—	—	—	—	—	—	—	Initial, no odor
1221		100	2.79	0.415	100	1.70	14.68	126	0.2	cloudy water
1226			3.49	0.410	952	1.55	14.80	82	0.2	
1231			3.99	0.404	828	1.53	14.76	57	0.2	
	←				Dry				→	

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

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

Sample ID No.: MRC-DF-05c-05020
Sample Location: DF-05c
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-2-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1311								
Method: Peristaltic pump	Cloudy	4.83	0.46	14.50	50c	0.64	0.2	0

PURGE DATA:

Date: 5-2-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:		See Low flow purge						
Total Well Depth (TD): 56.20								
Static Water Level (WL): 1.60		Data Sheet						
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1306								
Total Purge Time (min): 31								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
~~Total Petrol~~ 1,4 Dioxane	—	2 - 1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112Ccu4795-02

WELL ID.: MRC-OF-05C-050213
DATE: 5-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1235	1.60	100	—	—	—	—	—	—	—	Initial, no odor
1236		100	3.38	0.444	793	1.61	14.62	124	0.2	Cloudy water
1241		100	3.39	0.419	2999	0.81	14.52	82	0.2	
1246		100	4.11	0.412	990	0.70	14.66	40	0.2	
1251		100	4.48	0.414	701	0.69	14.37	22	0.2	
1256		100	4.73	0.414	484	0.64	14.31	8	0.2	
1301		100	4.79	0.412	492	0.62	14.42	4	0.2	
1306		100	4.83	0.410	500	0.64	14.50	0	0.2	
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Matt P

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04785.02

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

Sample ID No.: MRC-OF-06A-050113
Sample Location: OF-06A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-1-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1310								ORP
Method: Peristaltic pump	Slt. silty	4.19	0.244	16.09	26.5	1.24	0.1	51

PURGE DATA:

Date: 5-1-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: .5		See low flow purge data sheet						
Total Well Depth (TD): 37.30								
Static Water Level (WL): 2.85								
One Casing Volume(gal/L):								
Start Purge (hrs): 1022								
End Purge (hrs): 1054 → Day								
Total Purge Time (min): 32								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
1,4 Dioxane	—	2- 1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt Pa

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02

WELL ID.: MRC-OF-06A-050113
DATE: 5-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1022	2.85	100	~~2.05~~	~~0.267~~	~~193~~	~~1.90~~	~~16.50~~	—	—	Initial, no odor
1024		100	2.05	0.267	193	1.90	16.52	232	0.1	
1029			2.22	0.253	117	1.47	16.71	161	0.1	
1034			2.94	0.252	67.2	1.69	16.02	107	0.1	
1039			3.38	0.251	54.2	1.59	15.54	88	0.1	
1044			3.76	0.245	42.1	1.49	15.56	70	0.1	
1049			4.05	0.244	33.0	1.37	15.55	57	0.1	
1054			4.19	0.244	26.5	1.24	16.09	51	0.1	
1059					Dry					
			Well Recharge before Sampling							

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112EC04796-07

Sample ID No.: MRC-OF-06B-050113
Sample Location: OF-06B
Sampled By: VP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 5-1-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1152								ORP
Method: Peristaltic pump	Slightly	4.18	0.120	14.98	19.3	0.87	0.1	90

PURGE DATA:

Date: 5-1-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SEE Low Flow Purge Data Sheet					
Total Well Depth (TD): 50.10								
Static Water Level (WL): 4.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 1115								
End Purge (hrs): 1147								
Total Purge Time (min): 32								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-07
WELL ID.: Mac-DF-06B-050113
DATE: 5-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1115	~~4.10~~ 4.10	100	—	—	—	—	—	—	—	Initial, no odor
1117		100	2.51	0.131	21.2	1.84	15.71	178	0.1	Slightly cloudy
1122		100	3.27	0.119	23.0	1.11	15.80	130	0.1	
1127		100	3.72	0.118	19.5	0.98	15.11	112	0.1	
1132		100	3.99	0.119	19.6	0.88	14.95	88	0.1	
1137		100	4.06	0.119	19.9	0.87	14.93	81	0.1	
1142		100	4.09	0.119	19.3	0.86	14.97	88	0.1	
1147		100	4.10	0.120	19.3	0.87	14.98	90	0.1	
			All parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

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

Sample ID No.: MRC-OF-06C-050113
Sample Location: OF-06C
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-1-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1246	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Slightly	3.58	0.104	15.72	37.5	0.73	0.0	114

PURGE DATA:

Date: 5-1-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type:			SEE	LOW	FLOW	PURGE		
Total Well Depth (TD): 66.00								
Static Water Level (WL): 3.82			DATA	SHEET				
One Casing Volume(gal/L):								
Start Purge (hrs): 1210								
End Purge (hrs): 1241								
Total Purge Time (min): 31								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-OF-06C-050113
DATE: 5-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1210	3.82	100	—	—	—	—	—	—	—	Initial, no odor
1211		100	2.11	0.163	58.4	2.75	16.74	196	0.1	Slightly cloudy
1216		100	2.96	0.115	48.2	1.02	16.84	150	0.1	
1221		100	3.44	0.108	41.6	0.87	15.66	127	0.0	
1226		100	3.55	0.106	39.0	0.78	15.52	119	0.0	
1231		100	3.58	0.105	37.5	0.74	15.56	117	0.0	
1236		100	3.59	0.104	37.0	0.74	15.65	115	0.0	
1241		100	3.56	0.104	37.5	0.73	15.72	114	0.0	
				All parameters stabilized						
				Sampling Begins						

SIGNATURE(S): Hall R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRL
Project No.: 112IC04795

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

Sample ID No.: MRL-OF07-043013
Sample Location: OF07
Sampled By: SBL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/30/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1550	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	4.12	0.644	15.43	16.5	0.03	-	378

PURGE DATA:

Date: 4/30/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See		Low	Flow			
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge		Data	Sheet			
Total Well Depth (TD): 25.34								
Static Water Level (WL): 6.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1310								
End Purge (hrs): 1415								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

AC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112JC04795

WELL ID.: MRC-~~PRB~~ OF07-043013
DATE: 4/30/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1310	6.90	—	—	—	—	—	—	—	—	
1315	8.01	250	4.10	0.609	22.6	0.00	17.40	261	—	
1320	8.73	200	4.13	0622	16.7	0.00	16.69	282	—	
1325	9.52	200	4.14	0.620	15.7	0.00	16.75	313	—	
1330	10.47	200	4.13	0625	17.5	0.00	16.42	333	—	
1335	11.01	200	4.13	0.629	17.3	0.00	16.21	342	—	
1340	11.25	200	4.13	0.633	18.1	0.00	16.09	355	—	
1345	11.68	200	4.12	0.639	17.8	0.00	15.86	370	—	
1350	11.98	200	4.12	0.644	16.5	0.00	15.83	378	—	
Sampling for VOCs & 1,4-Dioxane										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-OFO8A-050113
Sample Location: OFO8A
Sampled By: S. Cameron
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: / Time: / Method:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/1/13								
Method: Peri Pump			Low	Flow	Purge			
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 1" PVC			Data	Sheet				
Total Well Depth (TD): 24.30								
Static Water Level (WL): 7.09								
One Casing Volume(gal/L):								
Start Purge (hrs): 1010								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	
1,4-Dioxane	-	2-1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795
WELL ID.: MRC-OFOPA-050113
DATE: 5/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1010	7.09	—	—	—	—	—	—	—	—	
1015	~	100	5.68	0.128	24.5	0.00	18.69	45	—	
1020	—	100	5.73	0.123	28.6	0.00	18.24	38	—	
1025	—	100	5.65	0.119	20.4	0.00	17.83	20	—	
1030	—	100	5.87	0.113	18.6	0.00	17.17	16	—	
1035	—	100	5.89	0.121	56.8	0.00	17.66	11	—	
1040	—	100	5.91	0.119	48.7	0.00	17.63	9	—	
1045	—	100	5.93	0.116	45.9	0.00	17.59	8	—	
1050	Well Dry									

SIGNATURE(S): _____

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRL
Project No.: 112I-004795

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

Sample ID No.: MRL-OF08B-050113
Sample Location: OF08B
Sampled By: S. Cameron
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/1/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1135								
Method: Peri Pump	Clear	6.27	0.155	18.45	34.7	0.00	—	-75

PURGE DATA:

Date: 5/1/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 1/2"								
Total Well Depth (TD): 37.34								
Static Water Level (WL): 6.91								
One Casing Volume(gal/L):								
Start Purge (hrs): 1055								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC,	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	

OBSERVATIONS / NOTES:

Well went Dry after filling VOC vials.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795
WELL ID.: MRC-OFOBB-0501B
DATE: 5/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1055	6.91	—	—	—	—	—	—	—	—	
1100	—	100	6.18	0.159	88.9	0.00	18.58	-47	—	
1105	—	100	6.21	0.160	78	0.00	18.28	-52	—	
1110	—	100	6.28	0.159	73.2	0.00	17.64	-58	—	
1115	—	100	6.32	0.159	71.6	0.00	17.39	-67	—	
1120	—	100	6.28	0.159	56.2	0.00	17.48	-66	—	
1125	—	100	6.23	0.159	41.0	0.00	17.66	-66	—	
1130	—	100	6.25	0.157	38.6	0.00	18.10	-69	—	
1135	—	100	6.27	0.155	34.7	0.00	18.45	-75	—	
Sampling for VOCs + 1,4-Dioxane			Well Dry after filling VOC vials							

SIGNATURE(S): _____

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: TNI04795

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

Sample ID No.: MRC-OF08C-050113
Sample Location: OF08C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Date: 5/1/13								
Time: 1350								
Method: Peri Pump	Brn/Cloudy	6.24	0.166	16.71	134	0.00	—	-66

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/1/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 1/2"								
Total Well Depth (TD): 67.11		Purge Data Sheet						
Static Water Level (WL): 7.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1250								
End Purge (hrs): 1415								
Total Purge Time (min): 85								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112J-004795
WELL ID.: MRC-OF08C-0501B
DATE: 5/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1250	7.95	—	—	—	—	—	—	—	—	
1255	—	100	6.24	0.149	76	0.00	21.54	-35	—	
1300	—	100	6.15	0.147	2817	0.00	19.67	-52	—	
1305	—	100	6.19	0.156	>1000	0.00	17.80	-60	—	
1310	—	100	6.21	0.161	>1000	0.00	17.11	-63	—	
1315	—	100	6.23	0.169	1789	0.00	16.66	-65	—	
1320	—	100	6.24	0.170	1136	0.00	16.63	-65	—	
1325	—	100	6.24	0.170	961	0.00	16.60	-66	—	
1330	—	100	6.24	0.169	752	0.00	16.60	-67	—	
1335	—	100	6.25	0.167	273	0.00	16.65	-66	—	
1340	—	100	6.25	0.166	160	0.00	16.70	-66	—	
1345	—	100	6.25	0.166	156	0.00	16.71	-66	—	
1350	—	100	6.24	0.166	134	0.00	16.71	-66	—	
Sampling for VOCs + 1,4-Dioxane										

SIGNATURE(S): AC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-OF08D-050113
Sample Location: OF08D
Sampled By: SPC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/1/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1450	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	6.27	0.124	16.32	6.87	2.00	-	-65

PURGE DATA:

Date: 5/1/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow Purge Data Sheet					
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 1/2"								
Total Well Depth (TD): 93.98								
Static Water Level (WL): 7.15								
One Casing Volume(gal/L):								
Start Purge (hrs): 1415								
End Purge (hrs): 1515								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 2.95								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL VIALS	✓
1,4-Dioxane	-	2-1L Amber	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04775
WELL ID.: MRC-OFOXD-OSO113
DATE: 5/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1415	7.15	—	—	—	—	—	—	—	—	
1420	—	100	5.13	0.144	35.1	0.00	17.65	-16	—	
1425	—	100	5.87	0.136	13.4	0.00	16.32	-21	—	
1430	—	100	6.08	0.129	7.27	0.00	15.27	-40	—	
1435	—	100	6.11	0.129	7.11	0.00	16.14	-52	—	
1440	—	100	6.18	0.128	6.21	0.00	17.31	-61	—	
1445	—	100	6.29	0.127	5.65	0.00	18.16	-65	—	
1450	—	100	6.27	0.124	6.87	0.00	16.32	-65	—	
Sampling for VOCs + 1,4-Dioxane										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112G04795-02

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

Sample ID No.: MRC-MW-01A-04/1613
Sample Location: MW-01A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-10-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1340								
Method: Peristaltic pump	Clear	6.71	0.264	23.16	9.7	1.01	0.1	120

PURGE DATA:

Date: 4-10-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See Low Flow Purge					
Static Water Level (WL): 12.00			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1243								
End Purge (hrs): 1335								
Total Purge Time (min): 52								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500 ml Poly	✓
Anchlorate	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112E04795-02
WELL ID.: MRC-MW-01A-04/1013
DATE: 4-10-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1243	13.60	300	—	—	—	—	—	—	—	Initial, no odor
1245	13.60	300	6.13	0.277	10.7	1.90	27.55	256	0.1	Clear water
1250	13.80	250	6.13	0.274	4.0	1.41	23.95	248	0.1	
1255	13.90	250	6.08	0.269	14.2	1.31	22.79	239	0.1	
1305	14.20	200	6.13	0.268	14.7	1.17	22.25	212	0.1	
1315	14.45	200	6.38	0.271	13.7	1.15	21.22	164	0.1	
1320	14.45	150	6.58	0.269	13.2	1.06	22.27	134	0.1	
1325	14.50	150	6.67	0.265	10.6	1.05	22.55	119	0.1	
1330	14.50	150	6.69	0.264	9.7	1.06	23.05	121	0.1	
1335	14.50	150	6.71	0.264	9.7	1.01	23.16	120	0.1	
				Well parameters Stabilize →						
				Sampling Begins →						

SIGNATURE(S): WMR

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Centr
Project No.: 112IC04795-02

Sample ID No.: MRC-MW02A-041013
Sample Location: MW-02A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-10-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1202	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clean	5.07	1.37	21.18	0.0	0.82	0.7	323

PURGE DATA:

Date: 4-10-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD):								
Static Water Level (WL): 7.45'			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1108								
End Purge (hrs): 1157								
Total Purge Time (min): 59								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112FC04795-02

WELL ID.: MRC-MW-2A-041013
DATE: 4-10-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1108	7.45	300	—	—	—	—	—	—	—	Initial, no odor
1112	8.30	300	4.94	1.45	21.2	1.62	22.47	310	0.7	Slightly cloudy
1117	8.70	300	4.88	1.50	15.9	1.23	18.39	324	0.8	↓
1122	8.85	250	4.96	1.45	14.9	1.01	19.06	327	0.7	
1132	8.70	200	5.01	1.35	12.2	0.894	21.51	326	0.7	
1142	8.70	200	5.01	1.35	2.8	0.84	21.30	326	0.7	Clean water
1147	8.70	200	5.06	1.34	0.0	0.83	21.63	324	0.7	
1152	8.70	200	5.06	1.33	0.0	0.82	21.87	323	0.7	↓
1157	8.70	200	5.07	1.33	0.0	0.82	21.18	323	0.7	
				Well parameters stabilized ⇒						
				Sampling Begins						

SIGNATURE(S): Nate R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112T04796

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

Sample ID No.: MRC-MW03A-041813
Sample Location: MW03A
Sampled By: SAE
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/18/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1040	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.79	0.492	15.20	6.0	0.85	0.2	51

PURGE DATA:

Date: 4/18/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Grab			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 13.84								
Static Water Level (WL): 2.77								
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1115								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters			
Dissolved Gas	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Metals	HNO_3	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795
WELL ID.: MRC-MW03A-041813
DATE: 4/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	2.77	—	—	—	—	—	—	—	—	
1000	3.48	250	5.37	0.660	642	1.09	17.06	46	0.3	
1005	3.98	250	5.73	0.633	802	0.81	16.42	65	0.3	
1010	3.95	250	5.79	0.620	288	0.77	16.26	60	0.3	
1015	3.98	250	5.83	0.618	124	0.74	16.04	56	0.3	
1020	3.95	250	5.86	0.613	60.7	0.73	15.89	51	0.3	
1025	4.42	250	5.87	0.603	51.4	0.66	15.45	46	0.3	
1030	4.86	250	5.78	0.558	16.3	0.60	15.23	49	0.3	
1035	5.31	250	5.74	0.523	12.1	0.73	15.21	51	0.2	
1040	5.62	250	5.74	0.492	6.0	0.45	15.20	52	0.2	
Sampling for Total Metals & VOA parameters.										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.:

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

Sample ID No.: MRC-MW04A-041813
Sample Location: MW04A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/18/13	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Time: 1225								
Method: Peri Pump	Clear	6.62	9.13	14.64	5.1	0.63	5.1	199

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/18/13								
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 13.75								
Static Water Level (WL): 3.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1135								
End Purge (hrs): 1230								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

SBC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER:

WELL ID.: MRC-MW04A-041813
DATE: 4/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1135	3.08	—	—	—	—	—	—	—	—	
1140	3.56	200	7.19	10.0	139	1.53	15.46	150	5.7	
1145	3.84	200	6.41	10.3	121	1.06	15.02	162	5.8	
1150	4.02	200	6.72	10.6	114	0.87	14.87	191	6.0	
1155	4.16	200	6.63	10.4	111	0.79	14.86	198	5.8	
1200	4.31	200	6.52	10.3	96.9	0.73	14.86	212	5.8	
1205	4.38	200	7.52	9.62	91.4	0.71	14.86	197	5.7	
1210	4.42	200	7.65	9.79	86.7	0.70	14.85	183	5.6	
1215	4.48	200	7.13	9.44	81.5	0.69	14.84	178	5.3	
1220	4.52	200	6.68	9.24	6.8	0.65	14.72	185	5.2	
1225	4.63	200	6.62	9.13	5.1	0.63	14.64	199	5.1	
Sampling	Total Metals									

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

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

Sample ID No.: MRC-~~MW~~ EXT04-040813
Sample Location: EXT04
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-8-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time:								
Method: Peristaltic pump	Clear	6.72	1.34	18.88	5.7	0.55	0.7	-28

PURGE DATA:

Date: 4-8-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: ~~4"~~ 4" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 18.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1457								
End Purge (hrs): 1543								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1-500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middlerivan Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-EXT04-040813
DATE: 4-8-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1457	18.30	300	—	—	—	—	—	—	—	Initial, no odor
1458	19.00	300	6.57	1.28	26.3	1.54	20.10	0	0.6	Slightly Cloudy
1503	19.50	200	6.72	1.32	15.2	0.96	19.19	-12	0.7	↓
1508	19.10	200	6.79	1.32	10.0	0.79	19.11	-17	0.7	Clean Water
1518	19.18	200	6.84	1.33	5.5	0.63	18.95	-22	0.7	↓
1528	19.20	200	6.88	1.33	6.5	0.60	18.84	-23	0.7	↓
1533	19.22	200	6.90	1.33	5.8	0.56	18.72	-24	0.7	↓
1538	19.25	200	6.91	1.33	5.8	0.55	18.78	-26	0.7	↓
1543	19.25	200	6.92	1.34	5.7	0.55	18.88	-28	0.7	↓

← Well Parameters stabilize →

← Sampling Begins →

SIGNATURE(S): Walt [signature]

PAGE 2 OF 2

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112EC04795-02

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

Sample ID No.: MRC-MW-05A-041013
Sample Location: MW-05A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-10-13								
Time: 1452								
Method: Peristaltic pump	Clear	5.48	1.26	20.20	0.0	0.99	0.6	252

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-10-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See	low	flow	purge		
Static Water Level (WL): 13.33								
One Casing Volume(gal/L):			Data	Sheet				
Start Purge (hrs): 1401								
End Purge (hrs): 1447								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metal	HNO3	3X1-500 ml Poly	✓

OBSERVATIONS / NOTES:

MS / MSD Collected

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-05A-041013
DATE: 4-10-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1401	13.33	300	—	—	—	—	—	—	—	Initial, no odor
1402	14.00	300	6.28	0.928	15.8	2.28	22.77	253	0.4	Slightly cloudy
1407	14.70	250	5.31	1.14	5.8	1.46	21.42	262	0.6	Clear water
1412	15.85	150	5.39	1.25	0.5	1.26	20.32	255	0.6	
1422	17.30	100	5.45	1.30	0.0	1.18	19.10	257	0.6	
1432	18.73	100	5.45	1.30	0.0	1.10	19.18	256	0.6	
1437	19.30	100	5.46	1.28	0.0	1.01	20.20	254	0.6	
1442	19.45	100	5.47	1.27	0.0	1.00	20.56	253	0.6	
1447	19.60	100	5.48	1.26	0.0	0.99	20.70	252	0.6	
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Matt Pa

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795

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

Sample ID No.: MRC-MW06A-042513
Sample Location: MW06A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/25/13								
Time: 1100								
Method: Peri Pump	Slightly brn	7.23	5.86	15.60	32.6	0.00	—	177

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/25/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 31.45		Purge Data Sheet						
Static Water Level (WL): 13.62								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1105								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795

WELL ID.: MRC-MW06A-042513
DATE: 4/25/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1000	13.62	—	—	—	—	—	—	—	—	
1005	14.79	300	6.34	5.82	>1000	0.00	17.95	236	—	
1010	15.60	150	6.79	5.70	966	0.00	17.28	222	—	
1015	16.21	150	6.83	5.76	921	0.00	16.72	219	—	
1020	16.83	150	6.95	5.82	839	0.00	16.11	215	—	
1025	17.28	150	7.03	5.82	763	0.00	15.98	204	—	
1030	17.87	150	7.12	5.82	709	0.00	15.69	197	—	
1035	18.62	150	7.16	5.86	132	0.00	15.70	194	—	
1040	19.74	150	7.18	5.89	59.5	0.00	15.70	191	—	
1045	20.32	150	7.21	5.87	42.3	0.00	15.68	186	—	
1050	21.79	150	7.23	5.86	35.7	0.00	15.64	182	—	
1055	22.37	150	7.23	5.86	34.1	0.00	15.63	179	—	
1100	22.84	150	7.23	5.86	32.6	0.00	15.60	177	—	
Sampling Total Metals										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112EC04795-02

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

Sample ID No.: MRC-EXT06-040813
Sample Location: EXT06
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-8-13								
Time: 1435								
Method: Peristaltic pump	Slightly	6.17	0.552	17.40	25.6	3.62	0.3	305

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-8-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 4" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 9.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1344								
End Purge (hrs): 1430								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Centra
PROJECT NUMBER: 1125C04795-02
WELL ID.: MRC-EKT06-040613
DATE: 4-6-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1344	9.90	300	—	—	—	—	—	—	—	Initial, readon
1345	9.95	300	6.44	0.540	56.1	4.37	21.43	284	0.3	slightly cloudy
1350	10.00	200	6.29	0.549	40.3	3.86	19.43	296	0.3	
1355	10.00	200	6.20	0.548	34.8	3.76	19.15	300	0.3	
1405	10.05	200	6.13	0.546	37.8	3.69	18.15	304	0.3	
1415	10.05	200	6.14	0.549	29.4	3.66	17.65	303	0.3	
1420	10.05	200	6.15	0.549	25.5	3.61	17.58	304	0.3	
1425	10.05	200	6.17	0.551	25.0	3.62	17.44	305	0.3	
1430	10.05	200	6.17	0.552	25.6	3.62	17.40	305	0.3	
			Well parameters Stabilized							
				Sampling Begins						

SIGNATURE(S): _____

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112T054795

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

Sample ID No.: MRC-MW07A-042513
Sample Location: MW07A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/25/13								
Time: 1215								
Method: Peri Pump	Clear	4.87	1.63	20.24	9.73	1.02	—	311

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/25/13								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 21.58								
Static Water Level (WL): 12.19								
One Casing Volume(gal/L):								
Start Purge (hrs): 1140								
End Purge (hrs): 1235								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 2gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
1,4-Dioxane	—	2-1L Amber	✓
Total Metals	HNO_3	1-500mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112c04795
WELL ID.: MRC-MW07A-042413
DATE: 4/24/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1140	12.19	—	—	—	—	—	—	—	—	
1145	12.56	200	5.28	1.70	17.6	1.55	18.07	235	—	
1150	12.82	200	5.01	1.70	11.1	1.40	18.22	253	—	
1155	12.82	200	4.99	1.69	11.00	1.30	18.42	272	—	
1200	12.94	200	4.96	1.68	10.63	1.28	18.94	283	—	
1205	13.09	200	4.92	1.65	9.85	1.17	19.56	301	—	
1210	13.29	200	4.88	1.64	9.14	1.10	19.75	309	—	
1215	13.47	200	4.87	1.63	9.23	1.07	20.24	311	—	
Sampling for 1,4-Dioxane + Total Metals										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW08A-040513
Sample Location: MW08A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/5/13								
Time: 1020								
Method: Peri Pump	Light Brn	5.64	4.26	12.39	80.5	5.29	1.6	-5

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/5/13								
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 13.31								
Static Water Level (WL): 0.17								
One Casing Volume(gal/L):								
Start Purge (hrs): 0930								
End Purge (hrs): 1050								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3- 40 mL vials	✓
1,4-Dioxane	—	2- 1 L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW08A-040513
DATE: 4/5/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0930	0.17	—	—	—	—	—	—	—	—	
0935	0.92	250	5.50	3.81	>1000	9.87	14.47	48	1.4	
0940	1.38	250	5.54	3.96	974	8.77	13.68	24	1.5	
0945	2.04	200	5.59	4.14	635	7.59	12.79	6	1.5	
0950	2.32	150	5.60	4.21	184	7.13	12.54	2	1.5	
0955	2.66	150	5.60	4.25	67	6.94	12.25	-5	1.6	
1000	2.96	150	5.62	4.29	125	6.28	12.20	-3	1.6	
1005	3.28	150	5.62	4.19	123	6.01	11.23	-4	1.6	
1010	3.61	150	5.62	4.24	119	5.85	12.27	-4	1.6	
1015	3.71	150	5.63	4.28	96.4	5.44	12.31	-5	1.6	
1020	3.76	150	5.64	4.26	80.5	5.29	12.39	-5	1.6	
Sampling	VOCs, 1,4-Dioxane, Perchlorate, Total Metals									

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW08B-040513
Sample Location: MW08B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/5/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1120								
Method: Peri Pump	Clear	4.93	0.078	19.86	9.81	4.37	0.0	289

PURGE DATA:

Date: 4/5/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 49.22								
Static Water Level (WL): -2.62								
One Casing Volume(gal/L):								
Start Purge (hrs): 1050								
End Purge (hrs): 1135								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 ml vials	✓
1,4-Dioxane	—	2-1 L Ambers	✓
Perchlorate	—	1-250 ml plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW08B-040513
DATE: 4/5/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1050	-2.62	—	—	—	—	—	—	—	—	
1055	-2.62	250	5.29	0.123	47.7	9.88	15.54	60	0.0	
1100	-2.62	250	4.88	0.105	20.5	4.40	14.93	203	0.0	
1105	-2.62	250	4.86	0.096	18.9	4.38	14.89	240	0.0	
1110	-2.62	250	4.84	0.084	17.9	4.34	14.86	261	0.0	
1115	-2.62	250	4.87	0.081	12.3	4.36	14.89	273	0.0	
1120	-2.62	250	4.93	0.078	9.81	4.37	14.96	289	0.0	
Sampling VOCs, 1,4-Dioxane, and Perchlorate.										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795

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

Sample ID No.: MRC-MW10A-042413
Sample Location: MW10A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/24/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1030								
Method: Peri Pump	Clear	6.34	0.552	15.03	8.80	0.00	—	-103

PURGE DATA:

Date: 4/24/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 13.09								
Static Water Level (WL): -0.39								
One Casing Volume(gal/L):								
Start Purge (hrs): 0950								
End Purge (hrs): 1055								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
1,4-Dioxane	None	2-1l Ambers	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112T-004795
WELL ID.: MRC-MW10A-042413
DATE: 4/24/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0950	-0.39	—	—	—	—	—	—	—	—	
0955	1.23	250	5.23	0.556	20.8	0.15	17.13	12	—	
1000	1.78	150	6.18	0.558	16.1	0.18	15.30	-89	—	
1005	2.03	150	6.23	0.556	14.3	0.09	15.16	-94	—	
1010	2.54	150	6.42	0.553	12.64	0.00	15.00	-101	—	
1015	2.78	150	6.38	0.550	12.56	0.00	14.98	-102	—	
1020	3.24	150	6.34	0.547	12.14	0.00	14.95	-102	—	
1025	3.63	150	6.36	0.541	9.34	0.00	15.01	-102	—	
1030	4.04	150	6.38	0.532	8.80	0.00	15.03	-103	—	
Sample	VOCs, Total Meth, + 1, 4-dioxane									

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-11A-040913
Sample Location: MW-11A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-9-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1517	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	6.07	0.727	20.15	0.0	0.48	0.4	64

PURGE DATA:

Date: 4-9-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 2.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1426								
End Purge (hrs): 1512								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	—

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-41A-040913
DATE: 4-9-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1426	2.30	300	—	—	—	—	—	—	—	Initial, no odor
1427	2.70	300	5.85	0.682	28.3	1.16	24.09	165	0.3	Slightly cloudy
1432	2.82	250	5.69	0.708	14.0	0.74	22.51	179	0.3	↓
1437	2.82	250	5.63	0.720	6.0	0.63	21.46	174	0.4	Clean water
1442	2.82	250	5.81	0.728	0.0	0.55	20.58	122	0.4	
1457	2.82	250	5.96	0.731	0.0	0.51	20.48	86	0.4	
1502	2.82	250	6.03	0.727	0.0	0.49	20.37	73	0.4	
1507	2.82	250	6.06	0.726	0.0	0.49	20.27	68	0.4	
1512	2.82	250	6.07	0.728	0.0	0.48	20.15	64	0.4	↓
			WQ Parameters Stabilize →							
			Sampling Begins →							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795

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

Sample ID No.: MRC-MW11C-042413
Sample Location: MW11C
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/24/13	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Time: 1135								
Method: ~~Grundfos~~ Peri Pump	Clear	5.03	0.036	19.66	3.84	2.22	—	280

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/24/13								
Method: Peri- Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 72.45								
Static Water Level (WL): 0.92								
One Casing Volume(gal/L):								
Start Purge (hrs): 1100								
End Purge (hrs): 1155								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 2.1								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL Vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRL
PROJECT NUMBER: 112IC04795

WELL ID.: MRL-MW11C-042413
DATE: 4/24/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1100	0.92	—	—	—	—	—	—	—	—	
1105	0.98	150	5.96	0.047	5.70	2.67	21.07	96	—	
1110	0.99	150	5.62	0.045	4.63	2.86	20.32	124	—	
1115	1.01	150	5.01	0.041	4.07	2.44	19.78	238	—	
1120	1.03	150	5.02	0.040	4.03	2.62	19.65	242	—	
1125	1.04	150	5.03	0.039	3.68	2.26	19.60	265	—	
1130	1.05	150	5.03	0.038	3.72	2.24	19.63	271	—	
1135	1.06	150	5.03	0.036	3.84	2.22	19.66	280	—	
Sampling VOCs + 1,4-Dioxane										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112G04795-02

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

Sample ID No.: MRC-MW12A-040213
Sample Location: MW12A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/2/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1100								ORP
Method: Peri Pump	Clear	5.33	0.250	9.44	30.3	1.01	0.0	63

PURGE DATA:

Date: 4/2/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 14.11								
Static Water Level (WL): 9.75								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1130								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Perchlorate:			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Fe, K, Mn, Ca, Mg, Na, SiO_2	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112G04795
WELL ID.: MRC-MW12A-040213
DATE: 4/2/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1000	0.75	—	—	—	—	—	—	—	—	
1005	1.60	100	5.24	0.243	106.3	1.76	10.11	118	0.1	
1010	2.12	100	5.22	0.247	68.7	1.17	10.58	82	0.0	
1015	2.56	100	5.21	0.247	61.2	1.11	10.33	78	0.0	
1020	2.79	100	5.21	0.247	54.0	1.06	10.17	75	0.0	
1025	3.11	100	5.23	0.248	51.1	1.21	9.86	73	0.0	
1030	3.58	100	5.25	0.251	47.9	1.33	9.72	68	0.0	
1035	3.74	100	5.26	0.252	45.7	1.18	9.68	66	0.0	
1040	4.04	100	5.28	0.253	42.6	0.99	9.65	65	0.0	
1045	4.16	100	5.29	0.253	40.8	1.00	9.61	64	0.0	
1050	4.38	100	5.29	0.253	39.5	1.00	9.55	63	0.0	
1055	4.39	100	5.31	0.251	35.4	1.00	9.48	63	0.0	
1100	4.39	100	5.33	0.250	30.3	1.01	9.44	63	0.0	
Sampling VOCs, Total Metals, 1,4-Dioxane and NAA Parameters.										

SIGNATURE(S): AC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW12B-040313
Sample Location: MW12B
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/3/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1055								
Method: Peri Pump	Slightly turbid	5.54	0.140	12.63	35.5	3.01	0.0	170

PURGE DATA:

Date: 4/3/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 29.41								
Static Water Level (WL): 22.9								
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1135								
Total Purge Time (min): 100								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Fe, K, Mn, Ca, Mg, Na, SiO_2	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW12R-040313
DATE: 4/3/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	2.29	—	—	—	—	—	—	—	—	
1000	3.27	250	5.37	0.185	82.4	3.05	12.67	183	0.0	
1005	4.20	250	5.25	0.150	71.4	2.75	12.25	180	0.0	
1010	4.98	150	5.33	0.146	54.9	2.73	12.19	181	0.0	
1015	5.76	150	5.39	0.142	49.1	2.71	12.17	181	0.0	
1020	5.98	150	5.43	0.140	36.7	2.68	12.30	182	0.0	
1025	7.41	150	5.46	0.140	44.0	2.66	12.33	183	0.0	
1030	7.83	150	5.43	0.140	41.1	2.62	12.36	181	0.0	
1035	8.94	150	5.53	0.140	33.9	2.60	12.40	178	0.0	
1040	9.53	150	5.52	0.140	33.2	2.61	12.43	174	0.0	
1045	10.10	150	5.52	0.140	32.6	2.63	12.47	171	0.0	
1050	11.16	150	5.53	0.140	34.1	2.84	12.58	170	0.0	
1055	12.32	150	5.54	0.140	35.5	3.01	12.63	170	0.0	
Sampling VOCs, Total Metals, 1,4-Dioxane and NAA Parameters.										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW12C-040213
Sample Location: MW12C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/2/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1225	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.03	0.027	13.39	7.67	5.04	0.0	319

PURGE DATA:

Date: 4/2/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 75.14								
Static Water Level (WL): -0.38								
One Casing Volume(gal/L):								
Start Purge (hrs): 1150								
End Purge (hrs): 1235								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 4.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW12C-040213
DATE: 4/2/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1150	-0.38	–	–	–	–	–	–	–	–	
1155	-0.38	500	4.74	0.028	8.71	5.02	13.61	233	0.0	
1200	-0.38	500	4.79	0.028	8.40	4.73	13.58	246	0.0	
1205	-0.38	500	4.87	0.028	7.82	4.51	13.51	267	0.0	
1210	-0.38	500	4.92	0.028	7.64	4.62	13.48	278	0.0	
1215	-0.38	500	4.95	0.028	7.72	4.77	13.43	299	0.0	
1220	-0.38	500	4.98	0.027	7.69	4.89	13.41	308	0.0	
1225	-0.38	500	5.00	0.027	7.67	5.04	13.39	319	0.0	
Sample for VOCs and 1,4-Dioxane										

SIGNATURE(S): AC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04295-02

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

Sample ID No.: MRC-MW13A-040213
Sample Location: MW13A
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/2/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1340	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	6.22	0.668	9.99	8.18	1.62	0.2	86

PURGE DATA:

Date: 4/2/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See	Low	Flow				
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge	Data	Sheet				
Total Well Depth (TD): 14.31								
Static Water Level (WL): 2.24								
One Casing Volume(gal/L):								
Start Purge (hrs): 1245								
End Purge (hrs): 1415								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MKC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MKC-MW13A-040213
DATE: 4/2/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1245	2.24	—	—	—	—	—	—	—	—	
1250	2.45	250	6.45	0.587	70.4	3.18	10.49	203	0.1	
1255	2.51	200	6.41	0.541	38.8	2.94	10.22	186	0.1	
1300	2.68	200	6.35	0.615	26.2	2.65	9.99	172	0.1	
1305	2.72	200	6.33	0.623	21.4	2.53	9.94	163	0.2	
1310	2.79	200	6.30	0.632	18.1	2.49	9.91	154	0.2	
1315	2.81	200	6.28	0.641	17.6	2.61	9.88	146	0.2	
1320	2.93	200	6.26	0.650	17.0	2.75	9.83	135	0.2	
1325	2.98	200	6.24	0.654	13.1	2.31	9.84	126	0.2	
1330	3.02	200	6.23	0.658	11.1	1.93	9.87	114	0.2	
1335	3.09	200	6.22	0.661	9.64	1.83	9.91	96	0.2	
1340	3.18	200	6.22	0.668	8.18	1.62	9.99	86	0.1	
Sampling for VOCs and 1,4-Dioxane										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW14A-040113
Sample Location: MW14A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4/1/13								
Time: 1235								
Method: Peri Pump	Clear	5.85	0.740	15.72	28.2	0.79	0.2	ORP 32

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/1/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 12.89								
Static Water Level (WL): 3.26								
One Casing Volume(gal/L):								
Start Purge (hrs): 1135								
End Purge (hrs): 1255								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

AC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW14A-040113
DATE: 4/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1135	3.26	—	—	—	—	—	—	—	—	
1140	3.62	250	5.75	0.755	>1000	1.14	20.89	60	0.2	
1145	3.91	250	5.73	0.751	617	1.00	19.52	82	0.2	
1150	4.12	200	5.74	12.711	482	0.96	19.93	87	0.2	
1155	4.43	200	5.74	0.691	293	0.91	18.51	94	0.2	
1200	4.69	200	5.81	0.699	204	0.91	17.39	88	0.2	
1205	4.91	200	5.86	0.718	128	0.91	16.31	86	0.2	
1210	5.04	200	5.79	0.724	153	0.98	15.91	82	0.2	
1215	5.13	200	5.72	0.736	166	1.51	15.68	78	0.2	
1220	5.26	200	5.78	0.739	148	1.02	15.62	64	0.2	
1225	5.38	200	5.84	0.741	120	0.85	15.58	55	0.2	
1230	5.45	200	5.84	0.740	92.4	0.82	15.68	43	0.2	
1235	5.52	200	5.85	0.740	[redacted]28.2	0.79	15.72	32	0.2	
Sampling for VOCs, Total Metals and 1,4-Dioxane										

SIGNATURE(S): _____

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04745-02

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

Sample ID No.: MRC-MW14B-040113
Sample Location: MW14B
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/1/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1055	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Slightly Cloudy	5.29	0.513	15.56	66.8	597	0.1	100

PURGE DATA:

Date: 4/1/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 30.02								
Static Water Level (WL): 4.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1125								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
1,4-Dioxane	—	2-1L ambers	✓
Total Metals	HNO_3	1-500mL plastic	✓
NAA Parameters:			
Dissolved Gasses	HCl	2-40mL vials	✓
Ammonia	H_2SO_4	1-250mL plastic	✓
Alkalinity, TDS, Anions	—	1-500mL plastic	✓
Fe, K, Mn, Ca, Mg, Na, SiO_2	HNO_3	1-250mL plastic	✓
DOC	H_2SO_4	2-40mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW14B-040113
DATE: 4/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	4.40	—	—	—	—	—	—	—	—	
1000	5.06	250	4.88	0.562	67.7	10.09	16.43	266	0.1	
1005	5.23	200	5.09	0.543	74.1	9.29	15.51	241	0.1	
1010	5.28	200	5.09	0.538	76.1	9.04	15.23	240	0.1	
1015	5.33	200	5.09	0.536	72.6	8.80	14.99	239	0.1	
1020	5.37	200	5.12	0.532	81.9	8.43	15.03	220	0.1	
1025	5.39	200	5.18	0.526	82.4	8.10	15.16	193	0.1	
1030	5.42	200	5.20	0.521	83.4	7.64	15.20	171	0.1	
1035	5.43	200	5.26	0.512	76.1	7.13	15.24	152	0.1	
1040	5.44	200	5.29	0.505	72.3	6.81	15.28	126	0.1	
1045	5.43	200	5.31	0.508	69.8	6.42	15.30	112	0.1	
1050	5.42	200	5.34	0.511	67.5	6.19	15.34	102	0.1	
1055	5.41	200	5.29	0.513	66.8	5.97	15.56	100	0.1	
Sampling for VOCs, 1,4-Dioxane, Total Metals and NA parameters										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW14C-040213
Sample Location: MW14C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/2/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1505	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.62	0.128	12.91	9.11	1.72	0.0	-1

PURGE DATA:

Date: 4/2/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 74.18								
Static Water Level (WL): 5.77								
One Casing Volume(gal/L):								
Start Purge (hrs): 1420								
End Purge (hrs): 1530								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L amber	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW14C-040213
DATE: 4/2/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1420	5.77	—	—	—	—	—	—	—	—	
1425	6.52	250	5.55	0.146	>1000	2.08	12.69	-35	0.0	
1430	6.64	150	5.56	0.143	306	1.88	12.73	-16	0.0	
1435	6.79	150	5.57	0.135	92.7	1.76	12.76	-5	0.0	
1440	6.88	150	5.58	0.133	63.8	1.77	12.79	14	0.0	
1445	6.99	150	5.58	0.131	35.5	1.77	12.81	26	0.0	
1450	7.06	150	5.61	0.130	20.4	1.73	12.84	12	0.0	
1455	7.12	150	5.62	0.129	17.9	1.72	12.89	5	0.0	
1500	7.16	150	5.62	0.128	11.9	1.72	12.91	3	0.0	
1505	7.21	150	5.62	0.128	9.11	1.72	12.91	-1	0.0	
Sampling for VOCs, Total Metals, and 1,4-Dioxane										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-15A-040913
Sample Location: MW-15A
Sampled By: NP
C.O.C. No.:

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

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (‰)	Other
Date: 4-9-13								
Time: 1136								
Method: Peristaltic pump	Clear	6.17	2.56	13.21	0.0	0.84	1.3	0

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-9-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	low	flow	purge			
Total Well Depth (TD):			Data	Sheet				
Static Water Level (WL): 0.66								
One Casing Volume(gal/L):								
Start Purge (hrs): 1045								
End Purge (hrs): 1131								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500ml HDPE Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-15A-040913
DATE: 4-5-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1045	0.60	300	—	—	—	—	—	—	—	Initial, no odor
1046	1.12	300	5.72	2.55	38.4	1.83	13.54	68	1.3	Slightly cloudy
1051	1.30	300	6.00	2.54	12.8	1.25	13.20	18	1.3	↓
1056	1.38	200	6.12	2.57	4.8	1.09	13.78	1	1.3	Clean water
1106	1.40	200	6.16	2.57	2.5	0.95	13.16	-7	1.3	↓
1116	1.40	200	6.22	2.56	0.0	0.90	14.07	-5	1.3	
1121	1.40	200	6.18	2.55	0.0	0.85	13.56	-3	1.3	
1126	1.40	200	6.17	2.56	0.0	0.84	13.25	-1	1.3	
1131	1.40	200	6.17	2.56	0.0	0.84	13.21	.0	1.3	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Walt R

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-16A-040913
Sample Location: MW-16A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-9-13								
Time: 1241								
Method: Peristaltic pump	Clear	4.75	1.16	13.60	8.5	0.79	0.6	ORP 291

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-9-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 0.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 1150								
End Purge (hrs): 1236								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Matt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-16A-040913
DATE: 4-9-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1156	0.60	300	—	—	—	—	—	—	—	Initial, no odor
1151	1.20	300	5.26	1.17	428	1.71	14.21	185	0.6	Cloudy water
1156	2.30	300	4.79	1.17	51.4	1.08	13.81	236	0.6	Slightly cloudy
1201	3.23	250	4.72	1.16	15.3	0.92	14.17	266	0.6	↓
1206	3.50	200	4.71	1.17	13.8	0.81	13.58	279	0.6	
1211	3.72	150	4.72	1.17	13.3	0.79	13.62	282	0.6	↓
1216	4.25	100	4.73	1.17	10.8	0.76	13.50	286	0.6	Clean water
1231	4.35	100	4.74	1.16	8.6	0.74	13.42	288	0.6	↓
1236	4.43	100	4.75	1.16	9.5	0.78	13.60	291	0.6	

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795

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

Sample ID No.: MRC-MW17A-042413
Sample Location: MW17A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/24/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1320	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	clear	6.01	2.77	22.70	13.2	0.00	-	-21

PURGE DATA:

Date: 4/24/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 18.98								
Static Water Level (WL): 6.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1350								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 35<1								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Amber	✓
Perchlorate	—	1-250 mL plastic	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRL
PROJECT NUMBER: 112IL04795
WELL ID.: MRL-MW17A-042413
DATE: 4/24/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	6.40	—	—	—	—	—	—	—	—	
1225	7.38	200	5.75	2.50	71000	3.62	22.65	59	—	
1230	7.51	200	5.76	2.53	87	0.00	21.95	52	—	
1235	7.54	200	5.77	2.54	84	0.00	21.87	50	—	
1240	7.60	200	5.77	2.54	78.3	0.00	21.77	44	—	
1245	7.61	200	5.79	2.56	63.2	0.00	22.03	39		
1250	7.61	200	5.82	2.58	42.6	0.00	2241	32	—	
1255	7.64	200	5.88	2.59	36.7	0.00	22.38	21	-	
1300	7.69	200	5.90	2.61	32.2	0.00	22.32	9	-	
1305	7.69	200	5.92	2.63	24.1	0.00	22.46	3	—	
1310	7.69	200	5.96	2.68	18.2	0.00	22.51	-4	-	
1315	7.69	200	5.97	2.69	16.3	0.00	2255	-11	—	
1320	7.69	200	6.01	2.77	13.2	0.00	22.70	-21	-	
Sampling	VOCs, Total	Metals, Perchlorate &		1,4-Dioxane						

SIGNATURE(S): _____

PAGE 1 OF 1

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

Sample ID No.: MRC-MW-18A-040513
Sample Location: MW-18A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-5-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1217								
Method: Peristaltic pump	Clear	5.77	0.649	16.84	0.0	2.11	0.3	320

PURGE DATA:

Date: 4-5-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 4.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1125								
End Purge (hrs): 1212								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 1.5								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02

WELL ID.: MRC-MW-18A-040513
DATE: 4-5-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1125	4.50	300	—	—	—	—	—	—	—	Initial, no odor
1127	5.20	300	5.49	0.670	9.3	3.30	18.75	365	0.3	clear water
1132	5.80	100	5.79	0.669	11.2	2.49	17.74	356	0.3	
1137	6.35	100	5.78	0.661	9.4	2.38	16.57	355	0.3	
1142	7.30	100	5.75	0.653	8.2	2.10	16.30	343	0.3	
1152	8.40	100	5.73	0.651	0.2	2.05	16.46	330	0.3	
1202	8.93	100	5.75	0.649	0.0	2.10	16.72	325	0.3	
1207	9.00	100	5.77	0.648	0.0	2.07	16.85	320	0.3	
1212	9.12	100	5.77	0.649	0.0	2.11	16.84	320	0.3	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Matt Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-19A-040513
Sample Location: MW-19A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-5-13 / Time: 1053 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	3.78	0.453	16.65	0.8	1.18	0.2	485

PURGE DATA:

Date: 4-5-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 8.15								
One Casing Volume(gal/L):								
Start Purge (hrs): 1002								
End Purge (hrs): 1048								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO_3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-pw-19A-040513
DATE: 4-5-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1002	8.15	300	—	—	—	—	—	—	—	Initial, no odor
1003	8.50	300	3.54	0.533	14.6	3.10	17.30	414	0.3	Slightly cloudy
1008	8.75	250	3.70	0.521	11.2	1.85	16.50	455	0.2	↓
1013	9.12	200	3.71	0.477	9.0	1.51	16.20	472	0.2	Clean water
1023	9.65	150	3.74	0.461	4.2	1.26	16.18	477	0.2	
1033	10.01	100	3.76	0.457	1.5	1.20	16.40	478	0.2	
1038	10.15	100	3.76	0.456	0.7	1.22	16.45	481	0.2	
1043	10.23	100	3.78	0.454	0.7	1.20	16.60	484	0.2	
1048	10.35	100	3.78	0.453	0.8	1.18	16.65	485	0.2	
			Well Parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walt B

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-20A-040513
Sample Location: MW-20A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-5-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1443	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	4.91	0.111	19.52	2.0	1.85	0.1	379

PURGE DATA:

Date: 4-5-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 11.67								
One Casing Volume(gal/L):								
Start Purge (hrs): 1357								
End Purge (hrs): 1438								
Total Purge Time (min): 41								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HCl	1 - 500 ml poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-20A-040513
DATE: 4-5-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1354	11.67	300	—	—	—	—	—	—	—	Initial, no odor
1353	12.15	300	5.61	0.137	66.6	3.48	21.04	345	0.1	Slightly cloudy
1358	13.00	250	4.96	0.122	41.9	2.40	19.71	367	0.1	↓
1403	13.55	200	4.91	0.116	41.3	2.17	19.47	371	0.1	↓
1413	14.45	150	4.90	0.113	38.0	1.82	19.39	375	0.1	↓
1423	14.75	150	4.91	0.111	6.9	1.90	19.52	378	0.1	Clean water
1428	14.95	100	4.91	0.111	1.8	1.80	19.58	379	0.1	↓
1433	15.00	100	4.91	0.111	2.0	1.90	19.55	380	0.1	↓
1438	15.05	100	4.91	0.111	2.0	1.85	19.52	379	0.1	↓
			Well parameters Stabilize →							
			Sampling Begins							

SIGNATURE(S): Walt Pea

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-21A-042213
Sample Location: MW-21A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-22-13 / Time: 1131 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Slightly	5.62	0.852	13.69	285	0.70	0.4	7

PURGE DATA:

Date: 4-22-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 2.60			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1126								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-21A-042213
DATE: 4-22-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	2.60	300	—	—	—	—	—	—	—	Initial, no odor
0956	3.55	300	1.54	0.921	54.2	1.58	14.67	294	0.4	Slightly cloudy
1004	4.95	250	2.83	0.899	12.0	1.02	13.76	177	0.4	
1006	5.90	150	3.91	0.900	7.9	0.94	13.46	120	0.4	
1016	6.40	100	4.99	0.898	6.1	0.81	13.19	44	0.4	
1026	7.30	100	5.37	0.894	7.5	0.79	13.11	19	0.4	
1036	8.10	100	5.54	0.891	13.2	0.74	13.14	8	0.4	
1046	9.12	100	5.57	0.884	60.8	0.73	13.21	5	0.4	
1056	9.95	100	5.59	0.869	174	0.66	13.39	3	0.4	
1106	10.56	100	5.57	0.860	255	0.64	13.54	6	0.4	
1116	11.12	100	5.63	0.855	283	0.73	13.60	6	0.4	
1121	11.32	100	5.63	0.854	288	0.74	13.62	6	0.4	
1126	11.45	100	5.62	0.852	295	0.70	13.69	7	0.4	
			Well parameters did not stabilize after 90 min max Purge Per Work Plan Start Sampling Begins							

SIGNATURE(S): Nate

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112SC04755.02

Sample ID No.: MRC-MW-21B-042213
Sample Location: MW-21B
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-22-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1245	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic Pump	Slightly	4.71	0.241	16.00	12.8	0.83	0.1	120

PURGE DATA:

Date: 4-22-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC			SEE low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): ~~1454~~	10.15		Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1154								
End Purge (hrs): 1240								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total Metals	HNO3	1 - 1 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
MEE	HCl	2 - 40 ml VOA	✓
DOC	H2SO4	2 - 40 ml VOA	✓
NH3-N	H2SO4	1 - 250 ml Poly	✓
ALK, TDS, Anions	—	1 - 500 ml Poly	✓
Fe, K, Mn, Ca, Mg, Na, SiO2	HNO3	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-21B-042213
DATE: 4-22-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1154	10.15	300	—	—	—	—	—	—	—	Initial, no odor
1155	10.60	300	5.04	0.277	220	2.12	16.14	139	0.1	cloudy water
1200	10.93	250	4.52	0.265	224	1.47	15.72	144	0.1	↓
1205	10.95	200	4.52	0.255	204	1.31	15.80	139	0.1	&
1215	11.00	200	4.56	0.242	37.6	0.99	15.88	131	0.1	Slightly cloudy
1225	11.00	200	4.63	0.241	16.4	0.87	15.78	126	0.1	↓
1230	11.10	200	4.68	0.241	13.8	0.83	15.81	123	0.1	
1235	11.15	200	4.71	0.241	12.8	0.82	15.90	121	0.1	
1240	11.20	200	4.71	0.241	12.0	0.83	16.00	120	0.1	✓

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

Sample ID No.: MRC-MW-22A-042213
Sample Location: MW-22A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-22-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1511	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	4.81	0.089	18.60	0.0	7.72	0.0	230

PURGE DATA:

Date: 4-22-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 14.15								
One Casing Volume(gal/L):								
Start Purge (hrs): 1335								
End Purge (hrs): 1506								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-22A-042213
DATE: 4-22-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1335	14.15	300	—	—	—	—	—	—	—	Initial, no odor
1336	14.90	300	5.06	0.112	8.3	4.12	19.14	213	0.1	Clear water
1341	15.85	300	4.80	0.115	9.2	1.95	18.50	145	0.1	
1346	16.70	250	4.78	0.114	6.3	1.20	18.60	132	0.1	
1356	18.20	150	4.72	0.099	2.4	2.45	18.63	211	0.0	
1406	19.25	100	4.73	0.091	1.0	2.70	18.48	240	0.0	
1416	20.05	100	4.72	0.089	0.9	2.95	18.38	252	0.0	
1426	20.95	100	4.72	0.088	0.2	4.01	18.38	251	0.0	
1436	21.90	100	4.77	0.088	0.0	3.96	18.69	243	0.0	
1446	22.60	100	4.80	0.087	0.0	2.61	18.67	240	0.0	
1456	23.22	100	4.79	0.087	0.0	2.98	18.51	236	0.0	
1501	23.50	100	4.81	0.088	0.0	2.97	18.53	232	0.0	
1506	23.80	100	4.81	0.088	0.0	2.72	18.60	230	0.0	

Well Parameters did not
Stabilize after 90 min max
Purge pure weak plan Sampling Begins

SIGNATURE(S): [signature]

PAGE 2 OF 2

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

Sample ID No.: Arc-MW-22B-042313
Sample Location: MW-22B
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-23-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1413	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic Pump	Clear	4.64	0.159	18.41	0.0	6.18	0.1	296

PURGE DATA:

Date: 4-23-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC				See low flow purge				
Total Well Depth (TD):								
Static Water Level (WL): 11.33				Data Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1237								
End Purge (hrs): 1408								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795=02

WELL ID.: MRC-MW-22B-042313
DATE: 4-23-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1237	11.33	300	—	—	—	—	—	—	—	Initial, no action
1238	12.17	300	4.99	0.157	0.0	1.74	19.59	241	0.1	Clean Water
1243	12.95	180	4.89	0.156	0.0	1.52	19.58	250	0.1	
1248	14.05	100	4.87	0.156	0.0	1.26	19.01	254	0.1	
1253	15.55	100	4.86	0.158	0.0	1.60	18.25	267	0.1	
1308	17.60	100	4.78	0.159	0.0	1.51	18.28	275	0.1	
1318	19.30	100	4.69	0.158	0.0	1.40	18.74	281	0.1	
1328	21.85	100	4.67	0.158	0.0	1.31	18.63	283	0.1	
1338	22.60	100	4.65	0.159	0.0	1.28	18.73	284	0.1	
1348	24.00	100	4.65	0.158	0.0	1.25	18.56	284	0.1	
1358	25.60	100	4.65	0.159	0.0	1.22	18.50	289	0.1	
1403	26.40	100	4.65	0.159	0.0	1.20	18.47	293	0.1	
1408	27.20	100	4.64	0.159	0.0	1.18	18.41	296	0.1	
			Well parameters did not stabilize							
			after 90 min max purge purge							
			[illegible] Flow Sampling Begins							

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW24A-032713
Sample Location: MW24A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/27/13								
Time: 1410								
Method: Peri Pump	Clear	5.41	1.72	14.42	6.21	7.77	0.5	207

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/27/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 20.01								
Static Water Level (WL): 7.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 1330								
End Purge (hrs): 1435								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters:			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Metals (Fe, K, Mn, Ca, Mg, Na, SiO_2)	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW24A-032713
DATE: 3/27/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1330	7.60	—	—	—	—	—	—	—	—	
1335	8.02	200	5.52	2.35	47.3	6.82	14.54	196	0.8	
1340	8.11	100	5.58	2.35	40.7	6.31	14.46	194	0.8	
1345	8.12	100	5.58	2.29	38.9	6.28	14.49	195	0.8	
1350	8.12	100	5.57	2.22	23.1	6.23	14.50	196	0.7	
1355	8.13	100	5.54	2.14	14.8	6.31	14.49	198	0.6	
1400	8.14	100	5.53	2.04	8.75	6.36	14.45	200	0.6	
1405	8.14	100	5.48	1.91	7.11	7.12	14.42	203	0.5	
1410	8.15	100	5.41	1.72	6.21	7.77	14.42	207	0.5	
Sampling for total Metals and NAA Parameters										

SIGNATURE(S):

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GROUNDWATER SAMPLE LOG SHEET

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Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MXC-MW25A-042213
Sample Location: MW25A
Sampled By: S. Cameron
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/22/13								
Time: 1320								
Method: Peri Pump	Clear	5.73	0.515	16.28	46.5	0.00	X	89

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/22/13								
Method: peri pump		See Low Flow						
Monitor Reading (ppm): –								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 29.42								
Static Water Level (WL): 12.86								
One Casing Volume(gal/L):								
Start Purge (hrs): 1230								
End Purge (hrs): 1400								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters:			
Dissolved Gas	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Fe, K, Mn, Ca, Mg, Na, SiO_2	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): S C

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795

WELL ID.: MRC-MW25A-042213
DATE: 4/22/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	12.86	—	—	—	—	—	—	—	—	
1235	13.43	200	5.63	0.538	69.6	0.00	16.05	186		
1240	13.65	200	5.66	0.517	58.7	0.00	16.03	172		
1245	14.11	200	5.72	0.508	54.5	0.00	16.04	169		
1250	14.52	200	5.74	0.501	51.6	0.00	16.26	145		
1255	14.68	200	5.74	0.503	48.1	0.00	16.23	114		
1300	15.18	200	5.74	0.506	44.8	0.00	16.19	106		
1305	15.24	200	5.74	0.507	43.6	0.00	16.04	106		
1310	15.48	200	5.75	0.507	41.2	0.00	15.95	107		
1315	15.63	200	5.74	0.512	43.1	0.00	16.04	95		
1320	15.72	200	5.73	0.515	46.5	0.00	16.28	89		
Sample	VOCs, 1,4-Dioxane, Total Metals, and WAA Parameters									

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW26A-032613
Sample Location: MW26A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/26/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1515	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	4.80	0.584	14.32	9.64	1.70	0.1	182

PURGE DATA:

Date: 3/26/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 22.67								
Static Water Level (WL): 10.03								
One Casing Volume(gal/L):								
Start Purge (hrs): 1420								
End Purge (hrs): 1520								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW26A-032613
DATE: 3/26/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1420	10.03	—	—	—	—	—	—	—	—	
1425	10.45	200	4.79	0.580	48.7	3.62	14.61	246	0.1	
1430	10.47	200	4.79	0.594	43.1	3.55	14.60	238	0.1	
1435	10.50	200	4.79	0.603	39.0	2.48	14.58	233	0.1	
1440	10.53	200	4.79	0.591	42.1	2.31	14.60	220	0.1	
1445	10.54	200	4.79	0.589	45.0	2.20	14.62	211	0.1	
1450	10.54	200	4.79	0.576	31.8	2.19	14.56	203	0.1	
1455	10.57	200	4.79	0.566	23.5	2.12	14.49	194	0.1	
1500	10.58	200	4.79	0.553	19.6	1.96	14.45	191	0.1	
1505	10.60	200	4.79	0.542	17.3	1.78	14.44	185	0.1	
1510	10.62	200	4.79	0.538	14.3	1.76	14.39	184	0.1	
1515	10.64	200	4.80	0.534	9.64	1.70	14.32	182	0.1	
Sampling for Total Metals										

SIGNATURE(S): A C

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GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: MRC
Project No.: 112C04795-02

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

Sample ID No.: MRC-MW27A-032713
Sample Location: MW27A
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/27/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1040								
Method: Peri Pump	clear	5.35	2.20	13.63	24.5	1.55	0.7	-6

PURGE DATA:

Date: 3/27/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low			flow			
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data			Sheet			
Total Well Depth (TD): 18.75								
Static Water Level (WL): 9.44								
One Casing Volume(gal/L):								
Start Purge (hrs): 0945								
End Purge (hrs): 1105								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters:			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Metals (Fe, K, Na, Ca, Mg, Mn, SiO_2)	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

AL

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC0495-02
WELL ID.: MRC-MW27A-032713
DATE: 3/27/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0945	9.44	—	—	—	—	—	—	—	—	
0950	9.61	250	5.26	2.19	22.1	1.87	14.52	19	0.7	
0955	9.61	200	5.29	2.20	20.6	1.63	14.16	9	0.7	
1000	9.61	200	5.31	2.21	19.3	1.57	13.95	-2	0.7	
1005	9.61	200	5.33	2.21	18.7	1.42	13.84	-4	0.7	
1010	9.60	200	5.34	2.21	18.1	1.36	13.76	-6	0.7	
1015	9.60	200	5.35	2.20	14.1	1.32	13.72	-6	0.7	
1020	9.60	200	5.35	2.20	12.6	1.30	13.69	-6	0.7	
1025	9.60	200	5.35	2.20	14.3	1.28	13.65	-6	0.7	
1030	9.60	200	5.35	2.20	17.4	1.24	13.63	-6	0.7	
1035	9.60	200	5.35	2.20	18.6	1.55	13.67	-6	0.7	
1040	9.60	200	5.35	2.20	24.5	1.55	13.63	-6	0.7	
Sampling for VOCs, Total Metals, and MNA Parameters										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW27B-032713
Sample Location: MW27B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/27/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1140	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.18	0.642	14.42	7.63	4.65	0.2	161

PURGE DATA:

Date: 3/27/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 49.50								
Static Water Level (WL): 10.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1210								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Metals (Fe, K, Mn, Ca, Mg, Na, SiO2)	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW27B-032713
DATE: 3/27/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1105	10.11	—	—	—	—	—	—	—	—	
1110	11.53	200	5.20	0.653	25.5	4.85	15.14	92	0.3	
1115	12.19	200	5.19	0.648	16.4	4.73	14.96	106	0.2	
1120	14.20	200	5.18	0.641	11.9	4.69	14.82	127	0.2	
1125	14.64	200	5.17	0.641	10.14	4.68	14.79	136	0.2	
1130	15.92	200	5.16	0.642	9.33	4.66	14.77	149	0.2	
1135	16.34	200	5.17	0.642	8.44	4.65	14.83	159	0.2	
1140	17.64	200	5.18	0.642	7.63	4.65	14.92	161	0.2	
Sampling VOCs, Total Metals, and NAA parameters										

SIGNATURE(S):

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW27C-032713
Sample Location: MW27C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/27/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1310								
Method: Peri Pump	Clear	4.82	0.055	16.14	8.63	1.53	0.0	219

PURGE DATA:

Date: 3/27/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 77.12								
Static Water Level (WL): 12.80								
One Casing Volume(gal/L):								
Start Purge (hrs): 1225								
End Purge (hrs): 1315								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112TC04795
WELL ID.: MRC-MW27C-032713
DATE: 3/27/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1225	12.80	—	—	—	—	—	—	—	—	
1230	12.87	200	4.63	0.084	61	[redacted]	15.15	201	0.0	
1235	12.88	200	4.78	0.078	61.1	2.94	15.30	194	0.0	
1240	12.89	200	4.92	0.073	61.2	2.87	15.45	196	0.0	
1245	12.90	200	4.92	0.070	48.9	2.41	15.82	195	0.0	
1250	12.92	200	4.93	0.067	32.1	2.17	16.03	198	0.0	
1255	12.93	200	4.89	0.061	15.6	1.84	16.11	209	0.0	
1300	12.95	200	4.85	0.056	11.7	1.64	16.20	214	0.0	
1305	12.95	200	4.83	0.055	9.42	1.60	16.16	216	0.0	
1310	12.96	200	4.82	0.055	8.63	1.53	16.14	219	0.0	
Sampling for VOCs										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112TC04745-02

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

Sample ID No.: MRC-MW29A-032613
Sample Location: MW29A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/26/13								
Time: 1340								
Method: Peri Pump	Clear	4.69	1.34	13.50	6.62	1.66	0.4	286

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/26/13								
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 15.03								
Static Water Level (WL): 4.89								
One Casing Volume(gal/L):								
Start Purge (hrs): 1305								
End Purge (hrs): 1350								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 2.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

AL

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MKC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MKC-MW29A-032613
DATE: 3/26/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	4.89	—	—	—	—	—	—	—	—	
1310	5.12	300	4.60	1.32	40.6	4.68	13.37	259	0.4	
1315	4.94	150	4.59	1.31	36.1	3.10	13.39	253	0.4	
1320	4.94	150	4.58	1.30	21.6	1.60	13.42	269	0.4	
1325	4.93	150	4.62	1.31	16.1	1.48	13.45	273	0.4	
1330	4.92	150	4.64	1.32	7.45	1.21	13.48	280	0.4	
1335	4.93	150	4.68	1.33	6.94	1.38	13.49	284	0.4	
1340	4.94	150	4.69	1.34	6.62	1.66	13.50	286	0.4	
Sampling VOCs and Total Metals										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.:

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

Sample ID No.: MRC-MW30A-031513
Sample Location: MW30A
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/15/13								
Time: 1025								
Method: Peri Pump	Clear	5.70	1.37	9.23	9.37	6.90	0.4	165

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/15/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 14.18								
Static Water Level (WL): 0.44								
One Casing Volume(gal/L):								
Start Purge (hrs): 0950								
End Purge (hrs): 1030								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO_3	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW30A-031513
DATE: 3/15/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0950	0.44	–	–	–	–	–	–	–	–	
0955	0.84	200	5.85	1.33	39.5	7.84	9.77	166	0.4	
1000	0.91	200	5.83	1.32	30.4	7.52	9.66	165	0.4	
1005	0.99	200	5.79	1.29	27.6	7.25	9.53	164	0.4	
1010	1.02	200	5.76	1.31	20.4	7.11	9.42	165	0.4	
1015	1.05	200	5.72	1.33	18.3	6.98	9.29	165	0.4	
1020	1.06	200	5.71	1.35	12.4	6.91	9.26	165	0.4	
1025	1.08	200	5.70	1.37	9.37	6.90	9.23	165	0.4	
Sampling for Total Metals										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112I<04745-02

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

Sample ID No.: MRC-MW31A-031513
Sample Location: MW31A
Sampled By: SRL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/15/13								
Time: 1120								
Method: Peri Pump	Clear	4.74	0.274	10.47	5.72	4.25	0.0	413

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/15/13		See Low Flow Purge Data Sheet						
Method: Peri Pump								
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 14.14								
Static Water Level (WL): 2.38								
One Casing Volume(gal/L):								
Start Purge (hrs): 1045								
End Purge (hrs): 1125								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 2.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected ✓
Total Metals	HNO_3	1-250 mL plastic	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRL
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRL-MW31A-031513
DATE: 3/15/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1045	2.38	—	—	—	—	—	—	—	—	
1050	3.23	200	4.67	0.229	34.9	5.09	10.42	337	0.0	
1055	3.38	200	4.73	0.231	31.3	4.87	10.53	366	0.0	
1100	3.45	200	4.75	0.236	22.7	4.77	10.46	379	0.0	
1105	3.56	200	4.75	0.249	13.8	4.57	10.45	396	0.0	
1110	3.51	200	4.74	0.253	11.1	4.49	10.46	401	0.0	
1115	3.51	200	4.73	0.268	6.48	4.40	10.48	409	0.0	
1120	3.53	200	4.74	0.279	5.72	4.25	10.47	413	0.0	
Sampling for Total Metals										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name:
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW32A-031513
Sample Location: MW32A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/15/13								
Time: 1235								
Method: Peri Pump	Clear	4.98	1.07	10.23	16.9	5.39	0.3	359

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/15/13								
Method: Peri Pump		See Low Flow Purge						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Data Sheet						
Total Well Depth (TD): 14.44								
Static Water Level (WL): 3.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 1135								
End Purge (hrs): 1240								
Total Purge Time (min): 65 min								
Total Vol. Purged (gal/L): 3.5 gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 121C04795-02
WELL ID.: MRC-MW32A-031513
DATE: 3/15/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1135	3.11	—	—	—	—	—	—	—	—	
1140	4.18	250	4.97	0.949	58.8	6.09	10.48	371	0.2	
1145	4.62	200	4.91	0.967	47.7	6.15	10.35	374	0.3	
1150	4.68	200	4.90	0.981	45.3	6.02	10.30	375	0.3	
1155	4.71	200	4.89	0.991	42.6	5.89	10.25	375	0.3	
1200	4.80	200	4.90	0.998	36.4	5.93	10.24	376	0.3	
1205	4.89	200	4.90	1.01	30.8	5.97	10.24	376	0.3	
1210	4.98	200	4.92	1.02	22.6	6.18	10.23	377	0.3	
1215	5.11	200	4.94	1.03	15.5	6.41	10.21	378	0.3	
1220	5.21	200	4.96	1.04	14.9	6.10	10.19	371	0.3	
1225	5.35	200	4.97	1.05	14.2	5.75	10.19	376	0.3	
1230	5.46	200	4.97	1.06	15.4	5.43	10.21	362	0.3	
1235	5.54	200	4.98	1.07	16.9	5.39	10.23	359	0.3	
Sampling for VOCs										

SIGNATURE(S):

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW33A-031513
Sample Location: MW33A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/15/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1340								
Method: Peri Pump	Clear	4.99	0.113	10.14	9.79	2.40	0.0	359

PURGE DATA:

Date: 3-15-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 13.68								
Static Water Level (WL): 1.79								
One Casing Volume(gal/L):								
Start Purge (hrs): 1305								
End Purge (hrs): 1345								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

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

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112I C04795-02
WELL ID.: MRC-MW33A-031513
DATE: 3/15/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	1.79	—	—	—	—	—	—	—	—	
1310	2.52	250	4.83	0.125	63	3.01	10.56	328	0.0	
1315	2.94	200	4.95	0.113	50.2	2.16	10.36	340	0.0	
1320	2.98	200	4.96	0.113	30.6	2.08	10.33	343	0.0	
1325	3.02	200	4.98	0.112	22.3	1.97	10.32	347	0.0	
1330	3.06	200	4.98	0.112	20.0	1.97	10.33	347	0.0	
1335	3.14	200	4.98	0.112	14.4	2.18	10.26	352	0.0	
1340	3.21	200	4.99	0.113	9.79	2.40	10.19	359	0.0	
Sampling for VOCs, and Total Metals										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112G04795-02

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

Sample ID No.: MRC-MW34A-031513
Sample Location: MW34A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/15/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1435								
Method: PeriPump	Clear	5.55	0.287	10.37	8.62	7.39	0.1	274

PURGE DATA:

Date: 3/15/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: PeriPump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 14.24								
Static Water Level (WL): 3.33								
One Casing Volume(gal/L):								
Start Purge (hrs): 1400								
End Purge (hrs): 1440								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW34A-031513
DATE: 3/15/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1400	3.33	—	—	—	—	—	—	—	—	
1405	3.57	250	5.53	0.296	49.7	7.15	10.32	286	0.1	
1410	3.59	250	5.51	0.295	29.0	8.11	10.31	281	0.1	
1415	3.60	250	5.51	0.291	26.4	8.01	10.32	278	0.1	
1420	3.61	250	5.51	0.288	19.2	7.15	10.32	276	0.1	
1425	3.62	250	5.51	0.288	13.6	7.20	10.34	276	0.1	
1430	3.63	250	5.56	0.287	11.41	7.36	10.36	273	0.1	
1435	3.65	250	5.55	0.287	8.62	7.39	10.37	274	0.1	
Sampling VOCs										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW34B-032113
Sample Location: MW34B
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/21/13								
Time: 1035								
Method: Peri Pump	Clear	4.39	0.676	13.39	7.27	6.53	0.2	367

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/21/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 29.97								
Static Water Level (WL): 3.28								
One Casing Volume(gal/L):								
Start Purge (hrs): 0950								
End Purge (hrs): 1055								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
NAA Parameters:			
~~Methane/Ethane/Ethene~~			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
metals (Fe, K, Mn, Ca, Mg, Na, Si)	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 111IC04745-02

WELL ID.: MRC-MW34B-032113
DATE: 3/21/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0950	3.28	—	—	—	—	—	—	—	—	
0955	3.58	300	4.48	0.687	44.4	10.09	13.45	303	0.2	
1000	3.58	300	4.47	0.686	39.4	9.62	13.48	313	0.2	
1005	3.59	300	4.45	0.680	30.1	9.13	13.47	322	0.2	
1010	3.59	300	4.44	0.676	23.4	8.31	13.45	341	0.2	
1015	3.60	300	4.43	0.676	19.4	7.81	13.47	346	0.2	
1020	3.61	300	4.42	0.675	15.5	7.39	13.50	354	0.2	
1025	3.62	300	4.42	0.674	13.2	6.91	13.51	358	0.2	
1030	3.62	300	4.41	0.674	8.38	6.62	13.52	362	0.2	
1035	3.62	300	4.39	0.676	7.27	6.53	13.79	367	0.2	
Sampling for VOCs, Total Metals, and NAA parameters										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW34C-032113
Sample Location: MW34C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/21/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1205								
Method: Peri Pump	Clear	5.47	0.209	12.08	7.30	1.85	0.0	198

PURGE DATA:

Date: 3/21/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 54.76								
Static Water Level (WL): 3.16								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1210								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 4gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle If Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW34C-032113
DATE: 3/21/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1105	3.16	—	—	—	—	—	—	—	—	
1110	3.36	300	5.43	0.219	4.81	2.52	10.78	248	0.0	
1115	3.39	300	5.43	0.218	5.61	2.39	10.42	244	0.0	
1120	3.42	300	5.43	0.216	6.23	2.37	11.01	240	0.0	
1125	3.42	300	5.44	0.216	7.03	2.28	11.21	234	0.0	
1130	3.42	300	5.44	0.216	7.36	2.21	11.35	225	0.0	
1135	3.42	300	5.42	0.214	8.43	2.20	11.41	219	0.0	
1140	3.43	300	5.40	0.213	10.92	2.18	11.64	214	0.0	
1145	3.44	300	5.43	0.212	10.03	2.04	11.73	209	0.0	
1150	3.45	300	5.47	0.210	9.95	1.93	11.99	205	0.0	
1155	3.45	300	5.47	0.209	8.32	1.87	12.17	202	0.0	
1200	3.45	300	5.47	0.209	8.11	1.86	12.11	200	0.0	
1205	3.45	300	5.47	0.209	7.30	1.85	12.08	198	0.0	
Sampling for VOCs										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW37A-032613
Sample Location: MW37A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/26/13								
Time: 1225								
Method: Peri Pump	Clear	5.20	0.455	11.32	15.4	3.67	0.1	210

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/26/13			See Low Flow Purge Data Sheet					
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 17.15								
Static Water Level (WL): 6.62								
One Casing Volume(gal/L):								
Start Purge (hrs): 1130								
End Purge (hrs): 1250								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Natural Attenuation Parameters:			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Fe, K, Mn, Ca, Mg, Na, SiO_2	HNO_3	1-250 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112I C04795-02
WELL ID.: MRC-MW37A-032613
DATE: 3/26/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1130	6.62	—	—	—	—	—	—	—	—	
1135	7.39	250	5.25	0.444	1836	6.60	12.60	209	0.1	
1140	7.68	150	5.14	0.443	1328	4.21	12.49	147	0.1	
1145	7.83	150	5.15	0.443	669	3.92	12.16	193	0.1	
1150	7.89	150	5.16	0.444	136	3.99	12.03	194	0.1	
1155	7.98	150	5.17	0.445	99.3	4.07	11.84	196	0.1	
1200	8.03	150	5.16	0.445	43.6	4.74	11.79	200	0.1	
1205	8.09	150	5.14	0.445	36.7	5.40	11.75	205	0.1	
1210	8.11	150	5.18	0.451	16.4	4.12	11.43	207	0.1	
1215	8.14	150	5.19	0.454	15.4	3.71	11.31	209	0.1	
1220	8.16	150	5.19	0.453	16.8	3.68	11.32	210	0.1	
1225	8.18	150	5.20	0.455	15.4	3.67	11.32	210	0.1	
Sampling for VOCs, Total Metals, and NAA Parameters										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Central
Project No.: 112EC04795-02

Sample ID No.: MRC-MW-37B-032113
Sample Location: MW-37B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-13								
Time: 1340								
Method: Peristaltic pump	Clear	6.14	0.200	12.80	0.0	2.60	0.1	187

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 5.71				Data	Sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 1248								
End Purge (hrs): 1335								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Methane, Ethane, Ethene	HCl	2 - 40 ml VOA	✓
NH3-N	H2SO4	1 - 250 ml Poly	✓
Alk, TDS, Anions	—	1 - 500 ml Poly	✓
Metals (Fe, K, Mn, Ca, Mg, Na, SiO2)	HNO3	1 - 500 ml Poly	✓
DOC	H2SO4	2 - 40 ml VOA	

OBSERVATIONS / NOTES:

Circle If Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-37B-032113
DATE: 3-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1248	5.71	300	—	—	—	—	—	—	—	Initial, pre odor cloudy water
1250	6.30	300	5.65	0.323	153	4.58	10.45	178	0.1	
1255	~~6.45~~ 6.40	200	6.02	0.220	131	4.34	10.58	160	0.1	↓
1300	6.45	200	6.13	0.213	60.0	4.17	10.90	171	0.1	
1310	6.55	200	6.22	0.206	2.1	3.66	11.62	187	0.1	Odor clean water
1320	6.55	200	6.20	0.204	0.1	3.14	12.18	193	0.1	
1325	6.55	200	6.18	0.202	0.0	2.82	12.46	196	0.1	
1330	6.55	200	6.16	0.201	0.0	2.75	12.69	197	0.1	
1335	6.55	200	6.14	0.200	0.0	2.60	12.80	197	0.1	↓
←			Well parameters			Stabilized		→		
←			Sampling			Begins		→		

SIGNATURE(S): Walt Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-37C-032113
Sample Location: MW-37C
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 3-21-13								
Time: 1541								
Method: Peristaltic pump	Clear	6.28	0.117	13.61	0.0	0.58	0.1	27

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	Purge		
Total Well Depth (TD):								
Static Water Level (WL): 5.02			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1405								
End Purge (hrs): 1536								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle Raven Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-37C-032113
DATE: 3-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1405	5.02	300	—	—	—	—	—	—	—	Initial, no odor
1406	5.85	300	6.31	0.246	66.2	2.44	13.67	-27	0.1	Slightly cloudy
1411	7.20	200	6.64	0.269	63.1	1.13	13.47	-69	0.1	
1416	8.30	200	6.72	0.267	61.3	0.91	13.58	-82	0.1	
1426	10.30	100	6.75	0.156	4.9	0.77	13.49	-53	0.1	
1436	11.75	100	6.55	0.125	1.2	0.77	13.20	-17	0.1	Clean water
1446	13.50	100	6.46	0.118	0.0	0.68	13.08	8	0.1	
1456	15.13	100	6.38	0.116	0.0	0.64	13.16	17	0.1	
1506	17.05	100	6.29	0.117	0.0	0.65	13.48	24	0.1	
1516	18.75	100	6.23	0.116	0.0	0.62	13.55	28	0.1	
1526	20.45	100	6.24	0.117	0.0	0.59	13.90	27	0.1	
1531		100	6.27	0.117	0.0	0.58	13.65	27	0.1	
1536		100	6.28	0.117	0.0	0.58	13.61	27	0.1	

Well parameters did not stabilize after 90 min max purge purge ~~work~~ workplan sampling begins

SIGNATURE(S): Walt R

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04795-02

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

Sample ID No.: MRC-MW-38A-032013
Sample Location: MW-38A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 3-20-13								
Time: ~~[illegible]~~ 1134								ORP
Method: Peristaltic pump	Clear	4.51	0.124	9.20	1.3	8.66	0.1	400

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-20-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	low	flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 3.75			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1041								
End Purge (hrs): 1129								
Total Purge Time (min): 43								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02
WELL ID.: MRC-MW-38A-032013
DATE: 3-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1041	3.75	300	—	—	—	—	—	—	—	Initial, no odor
1044	4.40	300	5.64	0.133	32.3	8.59	11.11	280	0.1	Cloudy water
1049	4.42	200	4.71	0.120	16.5	7.25	11.49	340	0.1	Slightly cloudy
1054	4.90	200	4.55	0.123	7.8	8.41	10.04	366	0.1	Clean water
1104	4.97	150	4.54	0.122	4.3	8.39	9.68	385	0.1	
1114	5.08	100	4.53	0.123	1.5	8.70	9.43	398	0.1	
1119	5.12	100	4.52	0.123	1.4	8.66	9.29	400	0.1	
1124	5.16	100	4.52	0.124	1.3	8.65	9.21	401	0.1	
1129	5.20	100	4.51	0.124	1.3	8.66	9.20	400	0.1	
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-38B-032013
Sample Location: MW-38B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-20-13								
Time: 1359								
Method: Peristaltic pump	Clear	4.71	0.052	12.63	0.0	4.38	0.0	369

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-20-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 4.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 1307								
End Purge (hrs): 1354								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD ✓ Duplicate ID No.:

Signature(s):

Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112D04795-02
WELL ID.: MRC-MW-38B-032013
DATE: 3-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1307	4.10	300	—	—	—	—	—	—	—	Initial, no odor
1309	4.73	300	5.01	0.057	1.5	5.70	11.62	330	0.0	clear water
1314	5.15	250	4.75	0.055	0.0	5.09	11.56	354	0.0	
1319	5.30	200	4.65	0.054	0.0	4.89	11.65	363	0.0	
1329	5.40	180	4.65	0.053	0.0	4.65	12.09	366	0.0	
1339	5.30	100	4.69	0.052	0.0	4.50	12.38	369	0.0	
1344	5.30	100	4.70	0.052	0.0	4.44	12.41	367	0.0	
1349	5.30	100	4.70	0.052	0.0	4.40	12.58	370	0.0	
1354	5.30	100	4.71	0.052	0.0	4.38	12.63	369	0.0	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Wal

PAGE 2 OF 2

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IW04795

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

Sample ID No.: MRC-MW41A-042913
Sample Location: MW41A
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other CAP
Date: 4/29/13								
Time: 1040								
Method: Peri Pump	Clear	5.95	2.66	15.87	5.34	9.00	—	-52

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/29/13								
Method: Peri Pump		See	Low	Flow				
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 16.08								
Static Water Level (WL): 9.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1010								
End Purge (hrs): 1105								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1 L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MKC
PROJECT NUMBER: 112IC04795
WELL ID.: MRC-MW41A-042913
DATE: 4/29/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1010	9.90	—	—	—	—	—	—	—	—	
1015	10.25	200	5.44	2.69	9.28	0.00	18.28	45	—	
1020	10.50	200	5.75	2.69	9.36	0.00	17.44	-34	—	
1025	10.80	200	5.87	2.70	8.31	0.00	16.73	-40	—	
1030	11.28	200	5.91	2.68	7.24	0.00	16.31	-45	—	
1035	11.70	200	5.95	2.66	6.78	0.00	15.97	-50	—	
1040	11.89	200	5.45	2.66	5.34	0.00	15.87	-52	—	
Sampling for VOCs, Methyl 1,4 Dioxane, & Perchlorate										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04785

Sample ID No.: MRC-MW42A-041813
Sample Location: MW42A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/18/13								
Time: 1325								
Method: Peri Pump	Clear	5.38	1.99	18.08	6.9	0.43	1.0	152

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/18/13								
Method: Peri Pump								
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 18.84								
Static Water Level (WL): 11.33								
One Casing Volume(gal/L):								
Start Purge (hrs): 1250								
End Purge (hrs): 1330								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 1.5 gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER:

WELL ID.: MRC-MW42A-041813
DATE: 4/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1250	11.33	—	—	—	—	—	—	—	—	
1255	11.88	200	6.20	2.11	44.7	0.64	16.97	108	1.1	
1300	11.96	200	6.12	2.09	41.2	0.61	16.99	113	1.0	
1305	12.03	200	5.91	2.07	40.3	0.59	17.05	118	1.0	
1310	12.10	200	5.88	2.06	39.5	0.56	17.14	121	1.0	
1315	12.64	200	5.65	2.02	28.8	0.51	17.31	133	1.0	
1320	12.95	200	5.42	2.01	26.5	0.46	17.65	143	1.0	
1325	13.52	200	5.38	1.99	6.9	0.43	18.08	152	1.0	
Sampling	Total Metals									

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW43A-031813
Sample Location: MW43A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/18/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1330	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Slightly Cloudy	5.17	0.213	9.65	31.9	1.35	0.0	127

PURGE DATA:

Date: 3/18/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 13.02								
Static Water Level (WL): 1.21								
One Casing Volume(gal/L):								
Start Purge (hrs): 1230								
End Purge (hrs): 1345								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 4gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
PCBs	—	2- 1L Ambers	✓

OBSERVATIONS / NOTES:

Water emits odor.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112TC04795-02

WELL ID.: MRC-MW43A-031813
DATE: 3/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	1.71	—	—	—	—	—	—	—	—	
1235	1.96	250	5.12	0.191	699	2.52	10.17	-51	0.0	
1240	2.14	200	5.13	0.191	142	2.24	10.04	-3	0.0	
1245	2.53	200	5.16	0.191	86	2.16	9.93	64	0.0	
1250	2.81	200	5.18	0.190	77	2.10	9.87	109	0.0	
1255	2.98	200	5.18	0.191	64	2.03	9.85	113	0.0	
1300	3.13	200	5.17	0.193	38	1.96	9.81	119	0.0	
1305	3.24	200	5.16	0.196	61	1.63	9.78	121	0.0	
1310	3.40	200	5.16	0.200	78	1.56	9.70	124	0.0	
1315	3.41	200	5.16	0.206	68	1.81	9.68	125	0.0	
1320	3.41	200	5.17	0.210	49.6	1.97	9.66	127	0.0	
1325	3.48	200	5.17	0.211	38.4	1.63	9.65	127	0.0	
1330	3.54	200	5.17	0.213	31.9	1.35	9.65	127	0.0	
Sampling for PCBs										

SIGNATURE(S): AR

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-08

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

Sample ID No.: MRC-MW44A-031813
Sample Location: MW-44A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/18/13								
Time: 1450								
Method: Peri Pump	Clear	5.78	1.05	9.51	6.27	1.45	0.3	-110

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/18/13								
Method: Peri Pump			See	Low	Flow			
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge	Data	Sheet			
Total Well Depth (TD): 13.24								
Static Water Level (WL): 1.01								
One Casing Volume(gal/L):								
Start Purge (hrs): 1410								
End Purge (hrs): 1520								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
1,4-Dioxane	—	2-1L Ambers	✓
PCBs	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW44A-031813
DATE: 3/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1410	1.01	—	—	—	—	—	—	—	—	
1415	1.53	200	5.97	0.912	72.2	1.96	9.37	-86	0.2	
1420	1.75	200	5.88	0.979	17.6	1.16	9.35	-98	0.3	
1425	1.83	200	5.86	0.994	16.3	1.03	9.42	-101	0.3	
1430	1.92	200	5.85	1.02	15.4	0.98	9.55	-107	0.3	
1435	1.94	200	5.83	1.03	10.63	0.98	9.42	-107	0.3	
1440	1.96	200	5.81	1.04	7.83	0.97	9.39	-107	0.3	
1445	1.98	200	5.79	1.05	6.94	1.16	9.46	-109	0.3	
1450	2.03	200	5.78	1.05	6.27	1.45	9.51	-110	0.3	
Sampling for 1,4-Dioxane and VOCs.										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04785-02

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

Sample ID No.: MRC-MW-46A-042413
Sample Location: MW-46A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-24-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1520								
Method: Peristaltic pump	Clear	6.33	0.671	17.11	0.0	3.68	0.3	268

PURGE DATA:

Date: 4-24-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See Low Flow Purge Data Sheet					
Static Water Level (WL): 3.55								
One Casing Volume(gal/L):								
Start Purge (hrs): 1409								
End Purge (hrs): 1515								
Total Purge Time (min): 65								
Total Vol. Purged (Gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-46A-042413
DATE: 4-24-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1409	3.55	300	—	—	—	—	—	—	—	Initial, no odor
1410	3.80	300	3.07	0.652	8.5	5.68	14.75	351	0.3	
1415	4.00	250	4.86	0.671	5.8	4.54	14.56	288	0.3	
1420	4.20	200	5.66	0.683	5.2	4.43	14.64	261	0.3	
1430	4.55	200	5.62	0.695	3.9	4.30	14.89	235	0.3	
1440	4.80	150	5.57	0.692	2.9	4.03	16.41	291	0.3	
1445	4.81	100	5.30	0.681	3.0	3.54	16.49	277	0.3	
1450	4.81	100	6.82	0.680	2.6	3.90	17.00	280 270	0.3	
1455	4.81	100	6.62	0.685	0.0	3.81	16.56	220	0.3	
1505	4.81	100	6.35	0.675	0.0	3.68	17.18	262	0.3	
1510	4.81	100	6.34	0.673	0.0	3.60	17.09	266	0.3	
1515	4.81	100	6.33	0.671	0.0	3.68	17.11	268	0.3	

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-48A-042913
Sample Location: MW-48A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-29-13								
Time: 1103								
Method: Peristaltic pump	Clear	4.73	0.345	16.16	0.6	5.10	0.2	53

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-29-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 8.15'								
One Casing Volume(gal/L):								
Start Purge (hrs): 1012								
End Purge (hrs): 1058								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
MEE	HCl	2 - 40 ml VOA	✓
DOC	H2SO4	2 - 40 ml VOA	✓
NH3-N	H2SO4	1 - 250 ml Poly	✓
Alk, TDS, Anions	—	1 - 500 ml Poly	✓
Fe, Fl, Mn, Ca, Mg, Na, SiO2	HNO3	1 - 250 ml Poly	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-48A-042913
DATE: 4-29-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1012	8.15	300	—	—	—	—	—	—	—	Initial, no odor
1013	8.65	300	1.64	0.379	36.3	8.61	17.56	271	0.2	Slightly cloudy
1018	~~9.00~~ 9.00	250	1.74	0.369	26.5	7.88	16.81	220	0.2	↓
1023	9.05	250	2.48	0.352	15.1	7.11	16.79	167	0.2	Clear water
1033	9.12	200	3.16	0.345	4.8	6.36	16.39	125	0.2	↓
1043	9.20	200	3.22	0.346	4.7	6.34	16.46	120	0.2	
1048	9.30	200	4.73	0.342	0.7	5.23	16.23	44	0.2	
1053	9.30	200	4.71	0.343	0.6	5.19	16.20	50	0.2	
1054	9.30	200	4.73	0.345	0.6	5.16	16.16	53	0.2	
			Well Parameters Stabilized ⇒							
			Sampling Begins ⇒							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04795-02

Sample ID No.: MRC-MW-49A-042413
Sample Location: MW-49A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-24-13								
Time: 1205								
Method: Peristaltic pump	Clear	4.99	8.66	17.26	0.1	3.31	4.9	322

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-24-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SEE Low flow purge Data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 12.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1114								
End Purge (hrs): 1200								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
Perchlorate	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112FC04795-02
WELL ID.: MRC-MW-49A-042413
DATE: 4-24-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1114	12.42	300	—	—	—	—	—	—	—	Initial, no color clear water
1115	12.63	300	6.19	8.33	2.8	4.74	17.23	245	4.6	
1120	12.70	200	5.65	8.47	2.1	3.93	17.10	272	4.7	
1125	12.90	200	5.27	8.64	1.1	3.31	16.97	295	4.8	
1135	13.15	100	5.02	8.64	0.8	3.39	17.05	312	4.8	
1145	13.40	100	5.03	8.66	0.5	3.40	17.09	316	4.8	
1150	13.55	100	5.05	8.66	0.3	3.39	17.15	317	4.8	
1155	13.65	100	5.01	8.67	0.2	3.37	17.22	320	4.8	
1200	13.69	100	4.99	8.66	0.1	3.31	17.26	322	4.8	

Well parameters Stabilize

Sampling Begins

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04755.02

Sample ID No.: MRC-MW-50A-042413
Sample Location: MW-50A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-24-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1047								
Method: Peristaltic pump	Clear	5.28	4.13	17.24	6.0	1.36	2.2	280

PURGE DATA:

Date: 4-24-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 14.55								
One Casing Volume(gal/L):								
Start Purge (hrs): 0956								
End Purge (hrs): 1042								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 15								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
Perchlorate	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-50A-042413
DATE: 4-24-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0956	14.55	300	—	—	—	—	—	—	—	Initial, no odor
0957	14.95	300	6.62	5.22	13.7	4.89	17.88	259	2.7	Slightly cloudy
1002	15.00	250	5.43	4.39	7.6	2.09	17.52	307	2.3	clear water
1007	14.85	180	5.26	4.19	1.0	1.77	17.35	310	2.2	
1012	14.85	180	5.24	4.10	0.5	1.54	17.25	307	2.2	
1027	14.85	180	5.27	4.10	0.3	1.45	17.25	301	2.2	
1032	14.85	180	5.27	4.11	0.0	1.37	17.24	298	2.2	
1037	14.85	180	5.27	4.12	0.0	1.35	17.24	294	2.2	
1042	14.85	180	5.28	4.13	0.0	1.36	17.26	290	2.2	

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112TC04795-02

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

Sample ID No.: MRC-MW51A-040513
Sample Location: MW51A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/5/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1220								
Method: Peri Pump	Clear	4.81	1.96	14.85	5.31	0.92	0.6	385

PURGE DATA:

Date: 4/5/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 12.79								
Static Water Level (WL): 1.36								
One Casing Volume(gal/L):								
Start Purge (hrs): 1150								
End Purge (hrs): 1230								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Perchlorate	—	1-250 ml plastic	✓
Total metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW51A-040513
DATE: 4/5/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1150	1.56	—	—	—	—	—	—	—	—	
1155	2.16	150	4.72	1.86	13.6	2.75	15.65	349	0.6	
1200	3.02	150	4.75	1.90	8.53	1.50	15.27	371	0.6	
1205	3.14	150	4.78	1.93	9.62	1.23	15.06	374	0.6	
1210	3.33	150	4.79	1.95	10.10	1.07	14.91	379	0.6	
1215	3.46	150	4.80	1.95	6.82	0.99	14.88	382	0.6	
1220	3.57	150	4.81	1.96	5.31	0.92	14.85	385	0.6	
Sampling	Perchlorate and Total Metals.									

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112R04795-02

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

Sample ID No.: MRC-MW52A-040513
Sample Location: MW52A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/5/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1320								
Method: Peri Pump	Clear	5.51	4.68	13.77	5.36	0.88	1.8	62

PURGE DATA:

Date: 4/5/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow Purge Data Sheet					
Monitor Reading (ppm):								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 13.02								
Static Water Level (WL): 6.06								
One Casing Volume(gal/L):								
Start Purge (hrs): 1245								
End Purge (hrs): 1330								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Perchlorate	—	1-250 mL plastic	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-08
WELL ID.: MRC-MW52A-040513
DATE: 4/5/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1245	6.06	—	—	—	—	—	—	—	—	
1250	6.22	250	5.55	5.18	55.6	4.35	14.40	104	2.0	
1255	6.38	200	5.58	5.16	48.2	3.04	14.20	86	2.0	
1300	6.42	200	5.61	5.13	30.5	1.24	13.88	61	2.0	
1305	6.58	200	5.60	4.96	26.1	1.13	13.96	61	2.0	
1310	6.67	200	5.59	4.70	14.3	0.99	14.04	61	1.8	
1315	6.73	200	5.58	4.69	9.74	0.91	13.87	62	1.8	
1320	6.87	200	5.56	4.68	5.36	0.88	13.77	62	1.8	
Sample	Perchlorate and	Total Metals								

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-53A-032613
Sample Location: MW-53A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 3-26-13								ORP
Time: 1111								
Method: Peristaltic pump	Clear	7.06	4.47	15.86	0.0	5.99	2.3	201

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-26-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge						
Total Well Depth (TD):								
Static Water Level (WL): 4.43			Data sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1020								
End Purge (hrs): 1106								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD 1.

Duplicate ID No.:

Signature(s): Walt [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-53A-032613
DATE: 3-26-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1020	4.43	300	—	—	—	—	—	—	—	Initial, no odor
1021	4.60	300	4.43	3.00	2.4	8.26	15.09	336	1.8	Clean water
1026	4.53	200	6.45	4.62	0.0	6.40	15.71	205	2.5	
1031	4.53	200	6.73	4.69	0.0	6.36	15.45	203	2.5	
1041	4.53	200	6.94	4.68	0.0	6.14	15.37	201	2.5	
1051	4.53	200	7.02	4.57	0.0	6.17	15.61	202	2.4	
1056	4.53	200	7.04	4.51	0.0	6.05	15.76	199	2.4	
1101	4.53	200	7.06	4.49	0.0	6.01	15.82	200	2.3	
1106	4.53	200	7.06	4.47	0.0	5.99	15.86	201	2.3	
			Well parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): WMZ

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-53B-032613
Sample Location: MW-53B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-26-13								
Time: 1221								
Method: Peristaltic pump	Clear	6.74	3.58	12.83	0.0	2.49	1.8	225

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-26-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 4.90			Data	sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1130								
End Purge (hrs): 1216								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 15								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112FC04795-02
WELL ID.: MRC-MW-53B-032613
DATE: 3-26-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1130	4.90	300	—	—	—	—	—	—	—	Initial, no odor
1131	5.03	300	7.18	5.25	143	5.65	13.59	205	2.8	Cloudy water
1136	5.14	200	7.10	5.47	9.9	4.42	13.59	208	2.9	Clean water
1141	5.33	150	7.17	5.53	2.2	4.05	13.21	209	3.0	
1151	5.57	100	7.13	4.67	0.0	3.46	12.96	214	2.5	
1201	5.93	100	6.91	3.73	0.0	3.55	12.74	222	1.9	
1206	5.95	100	6.87	3.62	0.0	3.34	12.73	222	1.9	
1211	6.00	100	6.81	3.60	0.0	3.05	12.82	224	1.8	
1216	6.05	100	6.79	3.58	0.0	2.99	12.83	225	1.8	
			Well Parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walt R

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795.02

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

Sample ID No.: MRC-MW-54A-040913
Sample Location: MW-54A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-9-13								
Time: 1404								
Method: Peristaltic pump	Clear	5.16	0.162	19.16	0.0	0.80	0.1	212

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-9-13								
Method: peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 3.80								
One Casing Volume(gal/L):								
Start Purge (hrs): 1308								
End Purge (hrs): 1359								
Total Purge Time (min): 51								
Total Vol. Purged (gal/L): 2.2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
1,4 Dioxane	—	2 - 1L Ambers	✓
Leachate	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02

WELL ID.: MRC-MW-54A-040913
DATE: 4-9-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1308	3.80	300	—	—	—	—	—	—	—	Initial, no odor
1309	4.20	300	5.54	0.110	29.1	1.43	21.14	206	0.0	Slightly Cloudy
1314	4.20	200	5.23	0.101	17.4	0.90	21.01	205	0.0	
1319	4.20	200	5.20	0.100	9.0	0.73	21.16	201	0.0	Clear water
1329	4.25	200	5.20	0.125	5.0	0.75	20.10	203	0.0	
1339	4.25	200	5.19	0.139	2.9	0.77	19.99	205	0.1	
1344	4.25	200	5.19	0.145	0.8	0.79	19.25	207	0.1	
1349	4.25	200	5.18	0.157	0.0	0.80	19.19	209	0.1	
1354	4.25	200	5.15	0.160	0.0	0.81	19.19	211	0.1	
1359	4.25	200	5.16	0.162	0.0	0.80	19.16	212	0.1	

Well parameters Stabilize

Sampling Begins

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04795.02

Sample ID No.: MRC-MW-56A-050813
Sample Location: MW-56A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 5-8-13								
Time: 1103								
Method: Peristaltic pump	Clean	4.10	0.959	18.72	0.0	0.70	0.5	-31

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-8-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		SEE Low Flow purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 6.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 1012								
End Purge (hrs): 1058								
Total Purge Time (min): 46								
Total Vol. Purged (gal): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
TAL metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112E04795-02
WELL ID.: MRC-MW-56A-050813
DATE: 5-8-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1012	6.26	300	—	—	—	—	—	—	—	Initial, no odor
1013	6.85	150	1.65	0.962	37.5	1.51	18.22	387	0.5	Slightly cloudy
1018	7.10	150	1.72	0.945	7.8	0.91	17.92	184	0.5	Clear water
1023	7.15	100	1.80	0.956	0.0	0.81	17.46	124	0.5	
1033	7.60	100	3.29	0.954	0.0	0.70	17.54	21	0.5	
1043	7.85	100	3.87	0.956	0.0	0.69	18.23	-18	0.5	
1048	7.85	100	4.01	0.960	0.0	0.70	18.44	-26	0.5	
1053	7.90	100	4.08	0.958	0.0	0.69	18.69	-28	0.5	
1058	7.90	100	4.10	0.959	0.0	0.70	18.72	-31	0.5	
				Well parameters Stabilize						
				Sampling Begins						

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-57A-042313
Sample Location: MW-57A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-23-13								
Time: 1547								
Method: Peristaltic pump	Clear	5.70	2.75	17.68	0.0	0.44	1.4	34

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-23-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 8.43			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1456								
End Purge (hrs): 1542								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml vials	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walter

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-57A-042313
DATE: 4-23-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1456	8.43	300	—	—	—	—	—	—	—	Initial purge Clean Water
1457	8.70	300	4.52	2.89	1.5	1.46	18.04	138	1.5	
1502	8.85	200	4.85	2.92	0.0	0.75	18.14	89	1.5	
1507	9.10	100	5.28	2.91	0.0	0.60	17.99	58	1.5	
1512	9.35	100	5.55	2.71	0.0	0.53	17.99	40	1.5	
1517	9.60	100	5.67	2.68	0.0	0.50	17.97	32	1.4	
1522	9.80	100	5.70	2.67	0.0	0.47	17.91	32	1.4	
1527	10.00	100	5.69	2.70	0.0	0.47	17.99	29	1.4	
1532	10.10	100	5.70	2.72	0.0	0.46	17.97	27	1.4	
1537	10.20	100	5.70	2.74	0.0	0.45	17.98	30	1.4	
1542	10.25	100	5.70	2.75	0.0	0.44	17.68	34	1.4	
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Wade

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-58A-042313
Sample Location: MW-58A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-23-13								
Time: ~~1042~~ 1022								
Method: Peristaltic pump	Clear	5.67	0.411	15.09	3.6	0.65	0.2	75

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-23-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	low	flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 2.90			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 0906								
End Purge (hrs): 1037								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-58A-042313
DATE: 4-23-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0906	2.90	300	—	—	—	—	—	—	—	Initial, no odor
0907	3.55	300	2.66	0.424	21.0	1.43	16.07	314	0.2	Slightly cloudy
0912	4.25	250	3.74	0.400	20.4	0.94	16.24	187	0.2	
0917	4.55	150	4.26	0.403	20.5	0.85	15.98	150	0.2	
0927	5.70	100	5.16	0.408	14.5	0.72	15.51	97	0.2	
0937	6.70	100	5.43	0.409	9.9	0.63	15.47	80	0.2	Clean water
0947	7.20	100	5.58	0.403	6.1	0.73	15.37	71	0.2	
0957	8.25	100	5.70	0.409	4.6	0.61	15.13	66	0.2	
1007	8.75	100	5.66	0.410	3.6	0.64	15.10	71	0.2	
1012	8.80	100	5.67	0.410	3.5	0.65	15.08	74	0.2	
1022	8.85	100	5.67	0.411	3.6	0.65	15.09	75	0.2	
~~1022~~										
~~1037~~										

~~Well parameters did not~~
~~Stabilize after 90 min max~~
~~Purge pump work plan Sampling Begins~~

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-59A-042313
Sample Location: MW-59A
Sampled By: WSP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-23-13								
Time: 1144								
Method: Peristaltic pump	Clear	5.72	2.20	15.67	0.0	0.52	1.1	55

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-23-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0-0								
Well Casing Diameter & Material Type: 2" PVC			See flow flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 9.80			Data sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1053								
End Purge (hrs): 1139								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	3x1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

MS / MSD Collected

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02

WELL ID.: MRC-MW-59A-042313
DATE: 4-23-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1053	9.80	300	—	—	—	—	—	—	—	Initial, no odor
1054	10.01	300	5.71	2.19	4.4	1.47	15.39	83	1.1	Clear Water
1059	10.15	200	5.71	2.21	3.6	0.87	15.35	66	1.1	
1104	10.25	150	5.74	2.21	4.7	0.77	15.45	58	1.1	
1114	10.50	100	5.76	2.21	0.0	0.66	15.42	53	1.1	
1124	10.90	100	5.79	2.21	0.0	0.54	15.47	56	1.1	
1129	11.00	100	5.77	2.20	0.0	0.52	15.49	49	1.1	
1134	11.05	100	5.73	2.20	0.0	0.51	15.62	51	1.1	
1139	11.10	100	5.72	2.20	0.0	0.52	15.67	55	1.1	
			Well parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Matt B

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04795-02

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

Sample ID No.: MRC-MW-60A-04-0213
Sample Location: MW-60A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-2-13 / Time: 1434 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	5.28	0.219	16.20	5.6	0.59	0.1	131

PURGE DATA:

Date: 4-2-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 14.45			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1343								
End Purge (hrs): 1429								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Total Metals	HNO3	2 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt E

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112SC04795-02

WELL ID.: MRC-MW-60A-040213
DATE: 4-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1343	14.45	300	—	—	—	—	—	—	—	Initial, meadow
1344	14.61	300	6.65	0.234	95.0	0.99	16.44	115	0.1	Slightly Cloudy
1349	14.72	250	6.00	0.229	52.0	0.90	16.40	127	0.1	↓
1354	14.75	240	5.81	0.224	25.4	0.84	16.35	137	0.1	↓
1404	14.82	150	5.22	0.220	66.9	0.76	16.58	145	0.1	↓
1414	14.85	150	5.19	0.218	10.1	0.64	16.58	140	0.1	Clean water
1419	14.87	150	5.24	0.218	5.6	0.60	16.41	135	0.1	↓
1424	14.88	150	5.25	0.218	5.5	0.60	16.43	135	0.1	↓
1429	14.88	150	5.28	0.219	5.6	0.59	16.20	131	0.1	↓
	←		Well	Monitor		Stabilize	→			
	→		Sampling	Begins			←			

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112F04795-02

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

Sample ID No.: MRC-MW-60B-040213
Sample Location: MW-60B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-2-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1544								
Method: Peristaltic pump	Clear	6.16	0.176	17.45	4.6	0.58	0.1	41

PURGE DATA:

Date: 4-2-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 13.75								
One Casing Volume(gal/L):								
Start Purge (hrs): 1453								
End Purge (hrs): 1539								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.7								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Total metals	HNO_3	1 - 500 ml Poly	✓
MEE	HCl	2 - 40 ml VOA	✓
DOC	H_2SO_4	2 - 40 ml VOA	✓
Alk, TDS, Anions	—	1 - 500 ml Poly	✓
Fe, K, Mn, Mg, Ca, SiO_2	HNO_3	1 - 250 ml Poly	✓
NH_3-N	H_2SO_4	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Walt B

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112FC04795-02
WELL ID.: MRC-MW-60B-040213
DATE: 4-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1453	13.75	300	—	—	—	—	—	—	—	Initial, no odor
1454	14.22	300	5.70	0.190	77.1	1.00	17.08	73	0.1	Slightly Cloudy
1459	14.45	250	5.78	0.199	64.3	0.87	17.11	65	0.1	↓
1504	14.35	150	5.87	0.203	45.7	0.79	17.14	58	0.1	
1514	14.35	150	5.91	0.192	26.7	0.68	17.18	56	0.1	↓
1524	14.35	150	6.05	0.176	5.7	0.64	17.31	47	0.1	Clean water
1529	14.35	150	6.09	0.176	4.6	0.60	17.35	44	0.1	
1534	14.35	150	6.12	0.176	4.4	0.59	17.40	43	0.1	↓
1539	14.35	150	6.16	0.176	4.6	0.58	17.45	41	0.1	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): WM Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW61A
Sample Location: MW61A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/22/13								
Time: 1510								
Method: Peri Pump	Clear	5.64	5.91	14.19	9.38	1.78	—	280

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/22/13								
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 13.46								
Static Water Level (WL): 5.53								
One Casing Volume(gal/L):								
Start Purge (hrs): 1435								
End Purge (hrs): 1530								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 2.91								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1-500 mL plastic XJ	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Yes
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC05785
WELL ID.: MRC-MW61A-042213
DATE: 4/22/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1435	5.53	—	—	—	—	—	—	—	—	
1440	5.75	150	5.60	8.89	31.0	1.01	15.57	224	—	
1445	5.88	150	5.65	8.70	24.8	0.78	15.33	232	—	
1450	6.02	150	5.64	7.34	19.2	0.48	14.96	244	—	
1455	6.15	150	5.64	6.41	14.6	0.27	14.65	259	—	
1500	6.24	150	5.64	6.13	15.3	0.98	14.41	264	—	
1505	6.38	150	5.64	5.92	17.2	1.67	14.32	277	—	
1510	6.41	150	5.64	5.91	9.38	1.78	14.19	280		
Sample for Total Metals										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW62A-030813
Sample Location: MW62A
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/18/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1040	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.05	0.263	10.54	7.53	2.78	0.1	102

PURGE DATA:

Date: 3/18/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 12.91								
Static Water Level (WL): 0.56								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1055								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO3	1-500 mL plastic	✓
PCBs	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW62A-031813
DATE: 3/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1000	0.56	—	—	—	—	—	—	—	—	
1005	2.52	350	5.28	0.274	21.1	6.47	11.16	128	0.1	
1010	3.21	200	5.13	0.269	18.0	5.16	10.70	116	0.1	
1015	3.22	200	5.10	0.266	12.3	4.41	10.78	108	0.1	
1020	3.21	200	5.08	0.266	11.84	4.21	10.71	106	0.1	
1025	3.21	200	5.06	0.264	11.32	3.99	10.68	103	0.1	
1030	3.21	200	5.05	0.264	9.61	3.82	10.66	101	0.1	
1035	3.21	200	5.05	0.264	8.74	2.96	10.59	101	0.1	
1040	3.21	200	5.05	0.263	7.53	2.78	10.54	102	0.1	
Sampling PCBs and Total Metals										

SIGNATURE(S): AC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112EC04795

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

Sample ID No.: MRC-MW62C-031813
Sample Location: MW62C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/18/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1200	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Slightly Turbid	5.60	0.267	14.03	49.8	0.81	0.1	-81

PURGE DATA:

Date: 3/18/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 64.82								
Static Water Level (WL): 2.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1100								
End Purge (hrs): 1220								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO_3	1-500 mL Plastic	✓
PCBs	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112I04795-02

WELL ID.: MRC-MW62C-031813
DATE: 3/18/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1100	2.65	—	—	—	—	—	—	—	—	
1105	2.84	250	5.52	0.309	38.5	1.34	12.94	-73	0.1	
1110	2.84	250	5.53	0.304	32.6	1.06	13.27	-80	0.1	
1115	2.86	250	5.56	0.298	24.3	1.01	13.33	-83	0.1	
1120	2.88	250	5.58	0.295	20.9	0.94	13.48	-86	0.1	
1125	2.90	250	5.59	0.294	19.6	0.89	13.56	-88	0.1	
1130	2.91	250	5.61	0.294	25.5	0.88	13.83	-89	0.1	
1135	2.91	250	5.61	0.280	28.4	1.11	13.91	-88	0.1	
1140	2.91	250	5.60	0.286	30.5	1.24	13.96	-87	0.1	
1145	2.92	250	5.60	0.281	31.4	0.88	13.98	-85	0.1	
1150	2.92	250	5.60	0.273	33.7	0.85	14.00	-82	0.1	
1155	2.93	250	5.60	0.269	36.4	0.83	14.01	-81	0.1	
1200	2.94	250	5.60	0.267	49.8	0.81	14.03	-81	0.1	
Sampling	Total Metals and PCBs.									

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795-02

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

Sample ID No.: MRC-MW63A-040313
Sample Location: MW63A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/3/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1240	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Per. Pump	Slightly Brn	5.82	1.41	10.30	30.7	1.87	0.4	67

PURGE DATA:

Date: 4/3/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 13.56								
Static Water Level (WL): 2.66								
One Casing Volume(gal/L):								
Start Purge (hrs): 1140								
End Purge (hrs): 1300								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3- 40mL vials	✓
1,4-Dioxane	—	2- 1L Ambers	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

AC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW63A-040313
DATE: 4/3/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1140	2.66	←	—	—	—	—	—	—	—	
1145	3.41	200	5.94	1.68	53	1.43	11.11	49	0.5	
1150	3.64	200	5.93	1.69	76	1.21	10.91	45	0.5	
1155	3.92	200	5.92	1.72	93.9	1.01	10.56	42	0.5	
1200	3.96	200	5.90	1.70	74.2	0.98	10.58	43	0.5	
1205	4.00	200	5.87	1.69	58.2	0.94	10.61	45	0.5	
1210	3.96	200	5.86	1.64	48.3	1.21	10.63	48	0.5	
1215	3.96	200	5.86	1.60	41.2	1.58	10.65	52	0.5	
1220	3.96	200	5.85	1.42	40.3	1.73	10.55	63	0.4	
1225	3.96	200	5.85	1.36	31.6	1.65	10.52	68	0.4	
1230	3.96	200	5.85	1.37	35.3	1.85	10.36	68	0.4	
1235	3.96	200	5.84	1.40	31.2	1.86	10.33	68	0.4	
1240	3.96	200	5.82	1.41	30.7	1.87	10.30	67	0.4	
Sampling for VOCs, Total Metals, and 1,4-Dioxane.										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

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

Sample ID No.: MRC-MW-644-042513
Sample Location: MW-644
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-25-13 / Time: 1104 / Method: Peristaltic Pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	5.61	2.79	14.99	0.5-	0.92	1.4	-28

PURGE DATA:

Date: 4-25-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 7.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 1013								
End Purge (hrs): 1059								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Perchlorate	—	1-250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pa

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112F004795-02

WELL ID.: MRC-MW-64A-042513
DATE: 4-25-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1013	7.60	300	—	—	—	—	—	—	—	Initial MW data
1014	7.75	300	3.79	2.69	9.1	2.20	18.11	272	1.4	Clear Water
1019	7.85	200	3.44	2.69	1.6	1.16	17.35	111	1.4	
1024	7.95	200	4.20	2.71	0.7	0.82	16.50	124	1.4	
1034	8.15	150	5.10	2.74	0.7	0.96	15.67	1	1.4	
1044	8.30	100	5.42	2.77	0.3	0.93	15.16	-18	1.4	
1049	8.42	100	5.53	2.78	0.4	0.92	14.99	-24	1.4	
1054	8.50	100	5.58	2.78	0.5	0.93	14.91	-26	1.4	
1059	8.57	100	5.61	2.79	0.5	0.92	14.89	-28	1.4	
			Well parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): WAB

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

Sample ID No.: MRC-MW-66A-042513
Sample Location: MW-66A
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-25-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other ORP
Time: 1214	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	
Method: Peristaltic pump	Clear	5.33	1.67	16.66	8.5	3.05	0.8	233

PURGE DATA:

Date: 4-25-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 6.00								
One Casing Volume(gal/L):								
Start Purge (hrs): 1123								
End Purge (hrs): 1209								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	3x1 - 500 ml PLY	✓

OBSERVATIONS / NOTES:

MS/MSD collected

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 42 IC 04795-02

WELL ID.: MRC-MW-66A-042513
DATE: 4-25-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1123	6.00	300	—	—	—	—	—	—	—	Initial, no odor
1124	6.45	300	5.05	1.73	59.1	4.19	15.51	114	0.9	Slightly cloudy
1129	6.35	250	5.30	1.70	62.7	3.59	15.63	124	0.9	
1134	6.35	250	5.36	1.67	36.4	3.35	15.83	160	0.8	
1144	6.35	250	5.32	1.66	18.8	3.27	16.00	189	0.8	
1154	6.35	250	3.35	1.66	9.5	3.23	16.33	208	0.8	Clear water
1159	6.35	250	5.36	1.66	6.0	3.13	16.44	223	0.8	
1204	6.35	250	5.35	1.67	6.3	3.07	16.57	229	0.8	
1209	6.35	250	5.33	1.67	8.5	3.05	16.66	233	0.8	
				Well parameters stabilize						
					Sampling Begins					

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112G04795.02

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

Sample ID No.: MRC-MW-67A-040313
Sample Location: MW-67A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-3-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1440								
Method: Peristaltic pump	Clear	3.95	6.00	16.53	0.0	0.80	3.2	431

PURGE DATA:

Date: 4-3-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See Low Flow Purge Data Sheet					
Static Water Level (WL): 19.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1349								
End Purge (hrs): 1435								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112G04795-02

WELL ID.: MRC-MW-67A-040313
DATE: 4-3-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1349	19.30	300	—	—	—	—	—	—	—	Initial, no odor
1350	19.97	300	3.79	5.37	13.5	2.68	16.93	411	2.9	Slightly cloudy
1355	20.75	200	3.81	5.78	8.5	1.81	16.86	420	3.1	Clear water
1400	21.33	200	3.82	5.93	3.4	1.17	16.68	424	3.2	
1410	21.60	100	3.82	5.93	1.9	0.91	16.86	428	3.2	
1420	21.90	100	3.83	5.96	1.0	0.82	16.86	430	3.2	
1425	22.00	100	3.84	5.99	0.0	0.82	16.63	430	3.3	
1430	22.10	100	3.85	5.98	0.0	0.81	16.64	431	3.2	
1435	22.20	100	3.85	6.00	0.0	0.80	16.53	431	3.2	
			Well Parameters Stabilize →							
			Sampling Begins							

SIGNATURE(S): Walt Pa

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-68A-040313
Sample Location: MW-68A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-3-13 / Time: 1539 / Method: Peristaltic Pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
	Clear	4.53	3.34	16.00	0.0	0.78	1.7	45.7

PURGE DATA:

Date: 4-3-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic Pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge						
Total Well Depth (TD):								
Static Water Level (WL): 13.35		Data sheet						
One Casing Volume(gal/L):								
Start Purge (hrs): 1448								
End Purge (hrs): 1534								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HCl	3 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

MS/MSD Collected.

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-68A-040313
DATE: 4-3-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1448	13.35	300	—	—	—	—	—	—	—	
1449	14.00	300	4.58	3.37	4.1	2.12	16.55	402	1.8	Initial, no odor
1454	14.50	200	4.52	3.37	2.8	1.42	16.27	424	1.8	clear water
1459	15.00	200	4.51	3.36	0.0	1.08	16.01	441	1.8	
1509	15.85	100	4.49	3.32	0.0	0.84	15.78	450	1.7	
1519	16.94	100	4.53	3.33	0.0	0.90	15.92	455	1.5	
1524	17.00	100	4.53	3.32	0.0	0.80	16.06	452	1.7	
1529	17.10	100	4.53	3.33	0.0	0.79	16.03	454	1.7	
1534	17.20	100	4.53	3.34	0.0	0.78	16.00	457	1.7	
			Wet Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Matt Pe

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-69A-040113
Sample Location: MW-69A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-1-13 / Time: 1317 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	6.65	5.23	16.58	0.0	0.67	2.8	140

PURGE DATA:

Date: 4-1-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 10.83								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1312								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD ✓ Duplicate ID No.:

Signature(s): Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02

WELL ID.: MRC-MW-69A-040113
DATE: 4-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	10.83	300	—	—	—	—	—	—	—	Initial pump action clean water
1222	11.15	300	6.41	6.17	8.6	1.74	17.75	86	3.4	
1227	11.50	250	6.43	6.55	6.3	1.15	17.35	115	3.6	
1232	11.65	200	6.35	6.47	5.6	1.12	17.40	134	3.5	
1292	11.93	150	6.23	5.79	2.9	0.80	17.30	137	3.1	
1252	12.30	100	6.15	5.46	0.0	0.64	17.34	140	2.9	
1302	12.70	100	6.11	5.32	0.0	0.65	17.20	137	2.9	
1307	12.80	100	6.10	5.24	0.0	0.66	17.00	139	2.8	
1312	12.90	100	6.09	5.23	0.0	0.67	16.98	140	2.8	
				Well Parameters Stabilized						
				Sampling Begins						

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04755-02

Sample ID No.: MRC-MW-6SB-040163
Sample Location: MW-6SB
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 4-1-13 / Time: 1434 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	5.52	1.96	17.50	0.0	0.91	1.0	266

PURGE DATA:

Date: 4-1-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic Peristaltic								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 6.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1343								
End Purge (hrs): 1429								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
~~Perchlorate~~			
~~6010s~~			
Perchlorate	—	1 - 250 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112FC04795-02
WELL ID.: MRC-MW-69B-040113
DATE: 4-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1343	6.65	300	—	—	—	—	—	—	—	Initial, no odor
1344	7.50	300	6.24	1.64	0.4	2.80	18.09	175	0.5	Clear water
1349	8.63	200	5.56	1.88	0.0	1.13	17.44	224	1.0	
1354	9.60	100	5.49	2.00	0.0	0.88	17.37	235	1.0	
1404	11.50	100	5.48	2.01	0.0	0.70	17.49	235	1.0	
1414	12.80	100	5.50	2.01	0.0	0.69	17.44	240	1.0	
1419	12.90	100	5.51	1.98	0.0	0.80	17.39	256	1.0	
1424	13.10	100	5.51	1.97	0.0	0.81	17.38	262	1.0	
1429	13.20	100	5.52	1.96	0.0	0.81	17.50	266	1.0	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): WM

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW70A-040313
Sample Location: MW70A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/3/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1405	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	slight Brn	5.59	1.12	9.93	34.0	0.91	0.3	-1

PURGE DATA:

Date: 4/3/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 4" PVC			Purge Data Sheet					
Total Well Depth (TD): 13.84								
Static Water Level (WL): 1.80								
One Casing Volume(gal/L):								
Start Purge (hrs): 1305								
End Purge (hrs): 1425								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 35<1								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112604795-02
WELL ID.: MRC-MW70A-040313
DATE: 4/3/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	1.80	—	—	—	—	—	—	—	—	
1310	2.09	200	5.55	1.15	113	1.66	9.84	-7	0.3	
1315	2.16	150	5.54	1.14	112	1.31	9.85	-1	0.3	
1320	2.40	150	5.52	1.13	109.3	1.00	9.85	3	0.3	
1325	2.63	150	5.54	1.13	84.9	0.96	9.86	1	0.3	
1330	2.79	150	5.57	1.13	63.5	0.89	9.88	0	0.3	
1335	2.88	150	5.58	1.12	58.6	0.87	9.87	0	0.3	
1340	3.00	150	5.58	1.12	51.8	0.85	9.87	-1	0.3	
1345	3.07	150	5.59	1.12	48.3	0.84	9.91	-1	0.3	
1350	3.15	150	5.59	1.12	41.4	0.83	9.94	-1	0.3	
1355	3.23	150	5.59	1.12	37.9	0.96	9.93	-2	0.3	
1400	3.26	150	5.59	1.12	36.3	0.94	9.93	-1	0.3	
1405	3.29	150	5.59	1.12	34.6	0.91	9.93	-1	0.3	
Sampling VOCs, Total Metals and 1,4-Dioxane										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW70B-040313
Sample Location: MW70B
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/3/13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1530								
Method: Peri Pump	Brown	7.82	0.580	12.27	1169	0.77	0.1	-134

PURGE DATA:

Date: 4/3/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 4" PVC								
Total Well Depth (TD): 28.68								
Static Water Level (WL): 3.31								
One Casing Volume(gal/L):								
Start Purge (hrs): 1430								
End Purge (hrs): 1545								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW70B-040313
DATE: 4/3/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1430	3.31	—	—	—	—	—	—	—	—	
1435	3.82	200	8.22	0.567	>1000	1.05	12.55	-196	0.1	
1440	4.08	200	7.85	0.539	126	1.07	12.38	-174	0.1	
1445	4.13	200	7.83	0.546	104	1.06	12.33	-163	0.1	
1450	4.29	200	7.81	0.554	91.0	1.06	12.33	-157	0.1	
1455	4.41	200	7.82	0.556	73.4	1.18	12.36	-151	0.1	
1500	4.50	200	7.83	0.558	59	1.24	12.45	-145	0.1	
1505	4.58	200	7.82	0.563	124	1.03	12.36	-142	0.1	
1510	4.64	200	7.80	0.573	633	0.87	12.27	-139	0.1	
1515	4.68	200	7.82	0.579	712	0.85	12.31	-138	0.1	
1520	4.73	200	7.84	0.582	919	0.81	12.44	-137	0.1	
1525	4.76	200	7.83	0.581	1034	0.78	12.31	-136	0.1	
1530	4.79	200	7.82	0.580	1169	0.77	12.27	-134	0.1	
Sampling	VOCs and 1,4-Dioxane									

SIGNATURE(S): RC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04755-02

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

Sample ID No.: MRC-MW-71A-040313
Sample Location: MW-71A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-3-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1257								
Method: Peristaltic pump	Clear	5.26	0.668	11.41	0.0	1.63	0.3	270

PURGE DATA:

Date: 4-3-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			Sel low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 1.65			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1206								
End Purge (hrs): 1252								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-71A-040313
DATE: 4-3-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1206	1.65	300	—	—	—	—	—	—	—	Initial, no odor
1207	1.97	300	5.33	0.696	32.8	3.07	11.77	237	0.3	Slightly cloudy
1212	2.15	200	5.18	0.691	12.0	2.45	11.62	257	0.3	↓
1217	2.40	200	5.16	0.670	5.1	1.98	11.52	277	0.3	Clean water
1227	2.70	250	5.20	0.665	2.4	1.71	11.49	287	0.3	
1237	2.85	150	5.21	0.665	0.9	1.69	11.46	290	0.3	
1242	3.20	100	5.23	0.666	0.0	1.67	11.44	275	0.3	
1247	3.30	100	5.24	0.667	0.0	1.65	11.41	272	0.3	
1252	3.35	100	5.26	0.668	0.0	1.63	11.41	270	0.3	
				WQ Parameters Stabilize →						
				Sampling Begins →						

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-71B-040313
Sample Location: MW-71B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-3-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1132								
Method: Peristaltic pump	Clear	5.49	0.470	12.82	0.0	7.39	0.2	226

PURGE DATA:

Date: 4-3-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 4.20				Data	sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 1041								
End Purge (hrs): 1127								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Canton
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-71B-040313
DATE: 4-3-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1041	4.20	300	—	—	—	—	—	—	—	Initial, no odor
1042	4.90	300	5.45	0.500	9.0	4.95	14.99	300	0.2	Clear water
1047	5.60	300	5.21	0.494	7.8	3.13	14.34	270	0.2	Clear water
1052	6.00	250	5.35	0.483	5.4	2.58	13.70	259	0.2	
1102	6.15	100	5.51	0.470	0.0	2.49	13.51	252	0.2	
1112	6.22	100	5.50	0.471	0.0	2.41	12.93	242	0.2	
1117	6.26	100	5.49	0.471	0.0	2.39	12.80	234	0.2	
1122	6.30	100	5.49	0.470	0.0	2.39	12.81	230	0.2	
1127	6.33	100	5.49	0.470	0.0	2.34	12.82	226	0.2	

Well Parameters Stabilized

Sampling Begins

SIGNATURE(S): Matt Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW72B-032613
Sample Location: MW72B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/26/13								
Time: 1105								
Method: Peri Pump	Clear	4.84	0.084	13.91	5.28	3.16	0.0	250

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/26/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 33.84								
Static Water Level (WL): 5.31								
One Casing Volume(gal/L):								
Start Purge (hrs): 1030								
End Purge (hrs): 1125								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	H_2SO_4	3-40 mL vials	✓
NATURAL ATTENUATION PARAMETERS:			
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-250 mL plastic	✓
Alkalinity, TDS, Anions	—	1-500 mL plastic	✓
Fe, K, Mn, Ca, Mg, Na, SiO_2	HNO_3	1-500 mL plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW72B-032613
DATE: 3/26/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1030	5.31	—	—	—	—	—	—	—	—	
1035	5.81	250	4.94	0.087	15.4	4.32	13.99	168	0.0	
1040	5.78	200	4.89	0.087	12.6	3.90	13.88	193	0.0	
1045	5.74	200	4.87	0.086	10.79	3.54	13.83	212	0.0	
1050	5.74	200	4.89	0.085	8.43	3.42	13.83	225	0.0	
1055	5.74	200	4.91	0.085	6.86	3.33	13.83	233	0.0	
1100	5.74	200	4.88	0.085	6.11	3.21	13.87	241	0.0	
1105	5.74	200	4.84	0.084	5.28	3.16	13.91	250	0.0	
Sampling	VOCs and NAA parameters									

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04745-02

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

Sample ID No.: MRC-MW73B-031413
Sample Location: MW73B
Sampled By: SRL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/19/13								
Time: 1500								
Method: Peri Pump	Clear	4.93	0.069	15.14	3.62	2.20	0.0	353

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/19/13								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 33.91								
Static Water Level (WL): 5.80								
One Casing Volume(gal/L):								
Start Purge (hrs): 1400								
End Purge (hrs): 1510								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3.71								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW73B-031913
DATE: 3/19/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1400	5.80	—	—	—	—	—	—	—	—	
1405	6.19	200	4.99	0.115	65.0	2.70	15.61	241	0.0	
1410	6.24	200	5.00	0.114	27.4	2.41	15.12	317	0.0	
1415	6.25	200	4.96	0.112	18.2	2.39	15.08	324	0.0	
1420	6.26	200	4.89	0.111	13.6	2.33	15.02	331	0.0	
1425	6.27	200	4.86	0.110	11.40	2.31	15.18	346	0.0	
1430	6.28	200	4.84	0.109	10.47	2.29	15.22	350	0.0	
1435	6.28	200	4.86	0.108	9.73	2.26	15.21	349	0.0	
1440	6.28	200	4.87	0.106	6.20	2.25	15.20	349	0.0	
1445	6.28	200	4.88	0.084	5.32	2.23	15.20	349	0.0	
1450	6.28	200	4.89	0.068	4.83	2.21	15.20	349	0.0	
1455	6.28	200	4.91	0.068	4.12	2.20	15.16	350	0.0	
1500	6.28	200	4.93	0.068	3.62	2.20	15.14	353	0.0	
Sampling for VOCs										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW74A-032113
Sample Location: MW74A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/21/13								
Time: 1340								
Method: Peri Pump	Clear	5.34	0.582	10.27	14.4	2.60	0.1	209

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/21/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 4" PVC		Purge Data Sheet						
Total Well Depth (TD): 18.14								
Static Water Level (WL): 7.02								
One Casing Volume(gal/L):								
Start Purge (hrs): 1245								
End Purge (hrs): 1355								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Perchlorate	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW74A-032113
DATE: 3/21/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1245	7.02	—	—	—	—	—	—	—	—	
1250	7.30	200	5.25	0.567	42.1	3.54	9.86	217	0.1	
1255	7.41	200	5.29	0.571	38.2	3.06	9.71	215	0.1	
1300	7.59	200	5.31	0.589	31.7	2.44	9.58	211	0.1	
1305	7.65	200	5.31	0.588	28.6	2.31	9.61	212	0.1	
1310	7.72	200	5.31	0.587	24.6	2.29	9.63	212	0.1	
1315	7.76	200	5.32	0.588	23.1	2.64	9.72	211	0.1	
1320	7.83	200	5.34	0.588	20.5	2.76	9.92	211	0.1	
1325	7.88	200	5.33	0.586	18.4	2.71	9.82	210	0.1	
1330	7.90	200	5.33	0.583	15.4	2.62	10.10	210	0.1	
1335	7.91	200	5.34	0.582	16.7	2.61	10.15	208	0.1	
1340	7.92	200	5.34	0.582	14.4	2.60	10.27	209	0.1	
Sampling										

SIGNATURE(S): RC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW74B-032113
Sample Location: MW74B
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/21/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1450	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.11	0.186	11.78	10.56	3.97	0.0	242

PURGE DATA:

Date: 3/21/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 4" PVC		Purge Data Sheet						
Total Well Depth (TD): 32.06								
Static Water Level (WL): 7.41								
One Casing Volume(gal/L):								
Start Purge (hrs): 1400								
End Purge (hrs): 1505								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 3.99								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3- 40 mL vials	✓
Perchlorate	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW74B-032113
DATE: 3/21/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1400	7.41	—	—	—	—	—	—	—	—	
1405	7.79	250	5.07	0.189	41	6.57	11.99	214	0.0	
1410	8.04	250	5.13	0.187	24.6	4.21	12.13	218	0.0	
1415	8.37	250	5.17	0.186	18.3	3.91	12.45	222	0.0	
1420	8.61	250	5.17	0.187	10.17	4.14	12.23	226	0.0	
1425	8.86	250	5.16	0.186	11.44	3.83	12.24	231	0.0	
1430	8.96	250	5.16	0.185	11.39	3.74	12.12	233	0.0	
1435	9.02	250	5.16	0.185	11.36	3.69	12.02	235	0.0	
1440	9.15	250	5.13	0.186	10.13	4.65	11.78	240	0.0	
1445	9.20	250	5.12	0.186	10.32	4.32	11.78	241	0.0	
1450	9.29	250	5.11	0.186	10.56	3.97	11.78	242	0.0	
Sampling for VOCs and perchlorate										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795-02

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

Sample ID No.: MRC-MW74C-031913
Sample Location: MW74C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/19/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1330	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri. Pump	Slightly Turbid	5.54	0.081	14.60	22.6	2.02	0.0	187

PURGE DATA:

Date: 3/19/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 54.89								
Static Water Level (WL): 7.96								
One Casing Volume(gal/L):								
Start Purge (hrs): 1230								
End Purge (hrs): 1345								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 3 Gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW74C-031913
DATE: 3/19/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1230	7.96	—	—	—	—	—	—	—	—	
1235	9.02	300	5.55	0.074	148	2.34	14.05	173	0.0	
1240	11.13	300	5.60	0.081	68.5	2.02	14.30	154	0.0	
1245	11.98	200	5.49	0.079	51.2	1.96	14.58	165	0.0	
1250	12.93	200	5.52	0.078	46.6	1.94	14.58	168	0.0	
1255	14.94	200	5.56	0.079	37.7	1.91	14.58	171	0.0	
1300	15.61	200	5.56	0.079	34.2	1.86	14.60	173	0.0	
1305	16.36	200	5.57	0.079	33.7	2.01	14.62	176	0.0	
1310	17.84	200	5.56	0.079	30.1	1.98	14.68	177	0.0	
1315	18.38	200	5.56	0.079	27.4	1.97	14.74	177	0.0	
1320	19.42	200	5.55	0.079	24.6	1.98	14.68	179	0.0	
1325	20.35	200	5.54	0.080	23.9	2.00	14.62	180	0.0	
1330	21.42	200	5.54	0.081	22.6	2.02	14.60	181	0.0	
Sampling for VOCs										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795

Sample ID No.: MRC-MW75A-042313
Sample Location: MW75A
Sampled By: SBC
C.O.C. No.:

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

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/23/13								
Time: 1335								
Method: Peri Pump	Clear	5.02	2.51	17.41	9.07	900	—	202

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/23/13								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 20.83								
Static Water Level (WL): 8.59								
One Casing Volume(gal/L): 1								
Start Purge (hrs): 1300								
End Purge (hrs): 1350								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 2 gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Perchlorate	—	1-250 mL plastic	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MKC
PROJECT NUMBER: 112I-04795

WELL ID.: MKC-MW75A-042313
DATE: 4/23/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	8.59	—	—	—	—	—	—	—	—	
1305	9.77	200	4.97	2.52	51.5	0.00	19.17	192	—	
1310	10.36	200	4.93	2.50	26.3	0.00	18.72	198	—	
1315	10.97	150	4.89	2.48	14.8	0.00	18.13	207	—	
1320	11.51	150	4.85	2.47	11.2	0.00	17.80	221	—	
1325	11.51	150	4.86	2.47	10.69	0.00	17.63	224	—	
1330	11.51	150	4.93	2.48	9.64	0.00	17.52	213	—	
1335	11.51	150	5.02	2.51	9.07	0.00	17.41	202	—	
Sampling for total metals + perchlorate										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-76A-031813
Sample Location: MW-76A
Sampled By: Walt
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-18-13								
Time: 1050								
Method: Peristaltic Pump	Clear	5.11	0.875	13.03	0.0	1.71	0.4	180

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-18-13								
Method: Peristaltic Pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 11.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 0958								
End Purge (hrs): 1045								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500 ml Poly	✓
VOCs	HCl	3 - 40 ml VOA	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): Walt

1

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-76A-031813
DATE: 3-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0958	11.40	300	—	—	—	—	—	—	—	Initial, no color
1000	11.63	300	5.15	0.882	2.1	3.29	15.66	165	0.4	Clear water
1005	11.75	200	5.21	0.868	1.2	2.54	14.86	153	0.4	
1010	12.00	200	5.29	0.864	0.0	2.21	14.37	147	0.4	
1020	12.18	180	5.23	0.866	0.4	2.03	13.58	156	0.4	
1030	12.25	100	5.15	0.869	0.0	1.95	13.11	170	0.4	
1035	12.30	100	5.14	0.872	0.0	1.77	13.07	174	0.4	
1040	12.32	100	5.12	0.874	0.0	1.69	13.06	177	0.4	
1045	12.35	100	5.11	0.875	0.0	1.71	13.03	180	0.4	
10										
			Well parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Wade R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04785.02

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

Sample ID No.: MRC-MW-76B-031813
Sample Location: MW-76B
Sampled By: PAH
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-18-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1217	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	5.72	0.222	15.60	9.2	0.64	0.1	64

PURGE DATA:

Date: 3-18-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge data sheet						
Total Well Depth (TD):								
Static Water Level (WL): 11.25								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1212								
Total Purge Time (min): 67								
Total Vol. Purged (gal/L): 3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-76B-031813
DATE: 3-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1105	11.25	300	—	—	—	—	—	—	—	Initial, no odor
1107	12.00	300	6.11	0.322	286	1.16	15.43	-32	0.2	Cloudy water
1112	12.33	250	6.30	0.309	207	1.00	15.48	-41	0.1	↓
1117	12.33	150	6.21	0.268	117	0.95	15.28	-9	0.1	↓
1122	12.33	150	5.87	0.222	75.9	0.91	15.36	55	0.1	Slighty Cloudy
1137	12.33	150	5.70	0.204	23.0	0.88	15.19	83	0.1	↓
1147	12.33	150	5.72	0.204	16.6	0.77	15.43	83	0.1	↓
1152	12.33	150	5.67	0.208	14.2	0.73	15.50	81	0.1	↓
1157	12.33	150	5.67	0.210	12.8	0.70	15.52	77	0.1	↓
1202	12.33	150	5.71	0.219	9.3	0.66	15.62	69	0.1	Clean water
1207	12.33	150	5.71	0.221	9.2	0.65	15.69	66	0.1	↓
1212	12.33	150	5.72	0.222	9.2	0.64	15.60	64	0.1	↓

Well parameters stabilize

Sampling Begins

SIGNATURE(S): Walt P

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Central
Project No.: 117C04795-02

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

Sample ID No.: MRC-MW-77A-031413
Sample Location: MW-77A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-19-13								
Time: 1508								
Method: Peristaltic pump	Clear	5.48	2.11	15.43	7.0	0.66	1.1	61

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-19-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See low flow purge					
Static Water Level (WL): 6.90								
One Casing Volume(gal/L):			Data sheet					
Start Purge (hrs): 1416								
End Purge (hrs): 1503								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112Cc4795-02
WELL ID.: MRC-MW-77A-031913
DATE: 3-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1416	6.90	300	—	—	—	—	—	—	—	Initial, no odor
1418	7.12	300	5.60	2.18	26.6	1.99	15.51	59	1.1	Slightly cloudy
1423	*7.15	200	5.52	2.16	13.6	1.16	15.37	61	1.1	
1428	7.15	200	5.53	2.14	10.9	0.91	15.28	59	1.1	
1438	7.15	200	5.53	2.11	11.5	0.74	15.32	57	1.1	
1448	7.20	200	5.51	2.11	8.9	0.69	15.32	58	1.1	Clean water
1453	7.20	200	5.50	2.11	7.1	0.68	15.52	59	1.1	
1458	7.20	200	5.49	2.11	7.0	0.67	15.46	60	1.1	
1503	7.20	200	5.48	2.11	7.0	0.66	15.43	61	1.1	
			Well Parameters Stabilize →							
			Sampling Begins →							

SIGNATURE(S): [signature]

3.0 gallons

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-78B-031813
Sample Location: MW-78B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 3-18-13								ORP
Time: 1510								
Method: Peristaltic pump	Slightly	7.30	2.92	13.36	54.8	1.17	1.5	-60

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-18-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge					
Total Well Depth (TD):			Data Sheet					
Static Water Level (WL): 8.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1333								
End Purge (hrs): 1505								
Total Purge Time (min): 92								
Total Vol. Purged (gal/L): 3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-78B-031813
DATE: 3-18-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1333	8.50	300	—	—	—	—	—	—	—	Initial, no odor
1335	9.21	300	6.24	2.77	262	4.70	13.68	75	1.4	Cloudy Water
1340	10.30	300	6.67	2.88	183	4.06	14.40	42	1.5	
1345	10.67	220	6.84	2.90	169	3.60	14.05	-1	1.5	
1355	10.75	150	7.03	2.97	126	3.14	13.50	-30	1.5	
1405	10.95	100	7.12	3.00	118	2.47	13.69	-45	1.6	
1415	10.85	100	7.17	3.01	102	2.10	13.41	-51	1.6	
1425	10.90	100	7.21	2.99	83.7	1.71	13.37	-57	1.5	Slighty Cloudy
1435	10.92	100	7.24	2.98	72.7	1.45	13.43	-60	1.5	
1445	10.92	100	7.27	2.96	67.0	1.32	13.44	-62	1.5	
1455	11.00	100	7.30	2.93	60.0	1.24	13.37	-61	1.5	
1500	11.00	100	7.30	2.92	56.0	1.19	13.40	-61	1.5	
1505	11.00	100	7.30	2.92	54.8	1.17	13.36	-60	1.5	

Well Parameter did not stabilize after 90 min of purge pure Workplan Sampling Begin

SIGNATURE(S): Walt P

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW79B-032013
Sample Location: MW79B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/20/13								
Time: 1440								
Method: Peri Pump	Clear	5.20	1.54	14.55	48.6	2.18	0.5	33

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/20/13								
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 36.91								
Static Water Level (WL): 9.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 13:40								
End Purge (hrs): 1455								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 45								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL Vials	✓
Total metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW79B-032013
DATE: 3/20/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1340	9.35	—	—	—	—	—	—	—	—	
1345	9.98	200	5.26	1.63	51.7	2.18	13.89	49	0.5	
1350	10.22	200	5.24	1.02	48.9	2.53	13.96	32	0.4	
1355	10.49	200	5.34	0.987	44.8	2.88	14.11	26	0.3	
1400	10.62	200	5.28	0.993	51.3	2.82	14.22	31	0.3	
1405	10.80	200	5.25	1.21	56.2	2.48	14.44	34	0.3	
1410	10.83	200	5.23	1.25	57.1	2.61	14.39	33	0.4	
1415	10.85	200	5.22	1.29	58.3	2.77	14.37	33	0.4	
1420	10.91	200	5.21	1.31	61.2	2.52	14.37	33	0.4	
1425	10.94	200	5.21	1.39	64.2	2.48	14.43	33	0.4	
1430	11.02	200	5.20	1.42	60.3	2.38	14.46	33	0.4	
1435	11.04	200	5.19	1.47	55.8	2.30	14.49	34	0.4	
1440	1113	200	5.20	1.54	48.6	2.18	14.55	33	0.5	
Sampling for VOCs and Total metals										

SIGNATURE(S): AL

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04795-02

Sample ID No.: MRC-MW-80A-040813
Sample Location: MW-80A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-8-13								
Time: 1101								
Method: Peristaltic pump	Clear	6.09	0.910	13.16	0.0	3.36	0.4	309

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-8-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 6.10			Data	sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1016								
End Purge (hrs): 1056								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Canton
PROJECT NUMBER: 112F04785-02

WELL ID.: MRC-MW-80A-040913
DATE: 4-8-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1010	6.10	300	—	—	—	—	—	—	—	Initial, MW-80A Slightly cloudy
1011	6.25	300	5.65	1.13	59.2	3.61	15.07	303	0.6	
1016	6.42	250	5.97	1.13	19.2	2.96	14.00	296	0.6	
1021	6.60	200	6.05	1.13	7.6	2.77	13.86	296	0.6	Clean water
1031	6.90	100	6.12	1.11	3.5	2.54	14.35	297	0.5	
1041	7.17	100	6.12	1.10	1.6	2.46	14.34	295	0.5	
1046	7.30	100	6.04	0.912	0.0	3.17	13.25	303	0.4	
1051	7.40	100	6.07	0.911	0.0	3.30	13.18	306	0.4	
1056	7.49	100	6.04	0.910	0.0	3.36	13.16	304	0.4	

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04755-02

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

Sample ID No.: MRC-MW-80B-050413
Sample Location: MW-80B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-8-13								
Time: 1225								
Method: Peristaltic pump	Clear	5.53	0.321	18.35	3.1	2.00	0.2	263

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-8-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 8.61								
One Casing Volume(gal/L):								
Start Purge (hrs): 1134								
End Purge (hrs): 1220								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
1,4 Dioxane	"	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-90B-040813
DATE: 4-8-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1134	9.61	300	—	—	—	—	—	—	—	Initial, no odor
1135	9.33	300	6.20	0.383	42.6	3.26	18.05	291	0.2	Slightly cloudy
1140	10.10	250	5.64	0.343	24.0	2.67	17.50	289	0.2	↓
1145	10.91	200	5.51	0.332	14.1	2.49	17.36	300	0.2	↓
1155	12.30	100	5.51	0.331	7.0	2.31	17.54	298	0.2	Clear water
1205	13.60	100	5.50	0.325	3.9	2.23	18.00	289	0.2	↓
1210	14.50	100	5.52	0.323	3.0	2.13	18.17	271	0.2	↓
1215	14.62	100	5.52	0.321	3.0	2.09	18.29	269	0.2	↓
1220	14.75	100	5.53	0.321	3.1	2.00	18.35	263	0.2	↓

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04795-02

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

Sample ID No.: MRC-MW-81A-040213
Sample Location: MW-81A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-2-13								
Time: 1107								
Method: Peristaltic pump	Clear	5.70	0.442	15.66	0.0	0.72	0.2	ORP 20

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-2-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 10.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1016								
End Purge (hrs): 1102								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Matt Pace

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-81A-040213
DATE: 4-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1016	10.90	300	—	—	—	—	—	—	—	Initial, no odor
1017	11.07	300	4.94	0.488	0.0	1.50	16.20	66	0.2	clear water
1022	11.20	200	5.32	0.456	0.0	1.02	15.79	35	0.2	
1027	11.25	180	5.45	0.449	0.0	0.89	15.64	27	0.2	
1037	11.33	190	5.61	0.447	0.0	0.79	15.46	19	0.2	
1047	11.35	150	5.65	0.447	0.0	0.79	15.51	19	0.2	
1052	11.37	150	5.67	0.444	0.0	0.74	15.64	19	0.2	
1057	11.39	150	5.68	0.443	0.0	0.73	15.67	19	0.2	
1102	11.40	150	5.70	0.442	0.0	0.72	15.66	20	0.2	
			Well parameter stabilize							
			Sampling Begins							

SIGNATURE(S): Matt B

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-81B-040213
Sample Location: MW-81B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-2-13 / Time: 1211 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clean	11.20	1.18	16.21	7.5	0.64	0.6	-148

PURGE DATA:

Date: 4-2-13 / Method: Peristaltic Pump	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 8.25			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1120								
End Purge (hrs): 1206								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
MEE	HCl	2 - 40 ml VOA	✓
NH3-N	H2SO4	1 - 250 ml Poly	✓
Alk, TDS, Anions	—	1 - 500 ml Poly	✓
(Fe, K, Mn, Ca, Mg, Na, Si02)	HNO3	1 - 250 ml Poly	✓
DOC	H2SO4	2 - 40 ml VOA	✓

OBSERVATIONS / NOTES:

Circle If Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-81B-040213
DATE: 4-2-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1120	8.25	300	—	—	—	—	—	—	—	Initial, no odor
1121	9.22	300	10.00	1.10	102	0.81	16.62	-304	0.5	Slightly cloudy
1126	9.70	200	10.00	1.10	94.6	0.80	16.60	-303	0.5	↓
1131	10.22	180	10.72	1.14	36.5	0.65	16.25	-266	0.6	↓
1141	10.50	150	11.19	1.18	25.2	0.61	16.12	-226	0.6	↓
1151	10.80	100	11.22	1.19	10.2	0.65	16.17	-169	0.6	Clear water
1156	10.80	100	11.22	1.19	7.4	0.65	16.32	-157	0.6	↓
1201	10.80	100	11.15	1.19	7.4	0.64	16.10	-150	0.6	↓
1206	10.80	100	11.20	1.18	7.5	0.64	16.21	-148	0.6	↓

Well Parameters Stabilize →

Sampling Begins →

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-86A-031313
Sample Location: MW-86A
Sampled By: Walt Payson
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-15-13								
Time: 1038								
Method: Peristaltic pump	Clear	6.47	4.10	10.48	0.0	2.07	2.2	48

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-15-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 4.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 0925								
End Purge (hrs): 1032								
Total Purge Time (min): 66								
Total Vol. Purged (gal/L): 20								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt Payson

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-86A-031513
DATE: 3-15-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0925	4.95	300	—	—	—	—	—	—	—	Initial, no odor
0927	5.20	300	5.84	4.04	9.0	7.91	12.55	187	2.1	Clear Water
0932	5.40	200	6.19	4.10	6.1	6.48	11.89	153	2.2	
0937	5.55	180	6.30	4.12	6.1	6.00	11.43	139	2.2	
0942	5.72	150	6.37	4.15	4.5	4.81	10.78	119	2.2	
0957	5.85	100	6.39	4.17	3.8	4.20	10.53	101	2.2	
1002	5.90	100	6.40	4.18	2.7	3.59	10.45	91	2.2	
1007	5.97	100	6.41	4.17	2.6	3.25	10.31	79	2.2	
1012	6.05	100	6.42	4.16	0.4	2.89	10.24	73	2.2	
1017	6.10	100	6.43	4.15	0.0	2.51	10.36	65	2.2	
1022	6.13	100	6.44	4.13	0.0	2.22	10.45	58	2.2	
1027	6.15	100	6.45	4.11	0.0	2.15	10.52	53	2.2	
1032	6.17	100	6.47	4.10	0.0	2.07	10.48	48	2.2	
				Well parameters stabilize						
				Sampling Begins						

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

Sample ID No.: MRC-MW86B-031513
Sample Location: MW-86B
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 3-15-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1227								
Method: Peristaltic pump	Clear	5.63	3.02	12.96	0.0	0.71	1.6	95

PURGE DATA:

Date: 3-15-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 6.17			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1048								
End Purge (hrs): 1222								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 3.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle If Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Matt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-86B-031513
DATE: 3-15-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1048	6.17	300	—	—	—	—	—	—	—	Initial, no odor clear water
1052	6.81	300	4.94	2.66	0.0	1.60	12.95	245	1.4	
1057	7.13	200	4.11	2.59	0.0	1.25	12.74	275	1.3	
1102	7.52	170	4.05	2.57	0.0	1.02	12.86	282	1.3	
1112	7.55	170	4.05	2.54	0.0	1.07	12.59	289	1.3	
1122	7.95	100	4.09	2.56	0.0	0.82	12.68	291	1.3	
1132	8.40	100	4.29	2.59	0.0	0.76	12.72	266	1.3	
1142	8.53	100	4.60	2.63	0.0	0.77	12.52	235	1.4	
1152	9.30	100	5.04	2.76	0.0	0.69	13.07	170	1.4	
1202	9.60	100	5.28	2.84	0.0	0.67	12.92	141	1.5	
1212	9.90	100	5.43	2.90	0.0	0.62	12.90	123	1.5	
1217	10.00	100	5.52	2.95	0.0	0.61	12.91	113	1.5	
1222	10.30	100	5.63	3.02	0.0	0.71	12.96	95	1.6	
			Well Parameters did not stabilize after 90 min max purge per Work Plan							

SIGNATURE(S): Walt Pa

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-87A-031513
Sample Location: MW-87A
Sampled By: VP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1600	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	orp
Method: Peristaltic Pump	Clear	6.38	5.73	14.45	4.7	1.01	3.1	-74

PURGE DATA:

Date: 3-15-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge data sheet						
Total Well Depth (TD):								
Static Water Level (WL): 11.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1345								
End Purge (hrs): 1406								
Total Vol. Purged (gal/L): 0.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓ 3-16

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-87A-031513
DATE: 3-15-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1345	11.95	200	—	—	—	—	—	—	—	Initial pw color
1346	12.35	100	6.11	5.97	8.2	1.53	14.11	-51	3.2	Clear water
1351	12.95	100	6.33	6.00	6.1	1.05	14.27	-69	3.2	↓
1356	13.50	100	6.36	5.99	6.0	0.92	14.42	-73	3.2	
1401	14.20	100	6.39	5.73	4.7	1.01	14.45	-74	3.1	↓
1406	←			—	Dry	—			→	

Well MW-87A went dry left Recharge 80% before Sampling Well

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-87B-031513
Sample Location: MW-87B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-15-13 / Time: 1550 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Slightly	11.10	3.62	17.62	29.3	3.61	1.6	-82

PURGE DATA:

Date: 3-15-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SEE	Low flow purge				
Total Well Depth (TD):								
Static Water Level (WL): 12.14			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1413								
End Purge (hrs): 1545								
Total Purge Time (min): 92								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total Metals	HNO3	1 - 500 ml Poly	

OBSERVATIONS / NOTES:

Circle If Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walter B

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-87B-031513
DATE: 3-15-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
12/13	12.14	300	—	—	—	—	—	—	—	Initial, no odor
1415	13.00	300	6.42	5.23	20.6	3.14	15.74	-47	2.8	Slightly cloudy
1420	13.98	200	6.73	5.06	18.8	1.09	16.22	-70	2.7	
1425	15.00	150	7.00	4.55	15.5	1.08	16.44	-101	2.4	
1435	16.50	100	7.45	4.40	12.0	0.95	16.71	-153	2.3	
1445	17.70	100	10.40	3.85	10.1	3.02	16.97	-222	2.0	
1455	19.60	100	11.41	3.20	8.2	4.66	17.29	-94	1.7	
1505	20.90	100	11.42	3.02	3.8	4.35	17.41	-91	1.6	
1515	22.50	100	11.36	3.01	12.3	4.08	17.53	-88	1.6	
1525	23.60	100	11.19	3.02	22.0	3.89	17.60	-86	1.6	
1535	24.60	100	11.14	3.02	29.1	3.61	17.52	-82	1.6	
1540	25.72	100	11.09	3.03	28.8	3.66	17.63	-82	1.6	
1545	26.61	100	11.10	3.02	29.3	3.61	17.62	-82	1.6	

well parameters did not
stabilize after 90 min
Max Purge purge work plan
Sampling Begins

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-88B-031913
Sample Location: MW-88B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-19-13								
Time: 1145								
Method: Peristaltic pump	Clear	5.11	0.060	15.33	0.0	1.84	0.0	167

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-19-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):		See Low Flow Purge						
Static Water Level (WL): 4.40								
One Casing Volume(gal/L):		Data Sheet						
Start Purge (hrs): 1053								
End Purge (hrs): 1140								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Matt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112FC04795-02

WELL ID.: MRC-MW-88B-031913
DATE: 3-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1053	4.40	300	—	—	—	—	—	—	—	Initial, no odor
1055	4.85	300	6.00	0.067	0.4	5.49	15.26	175	0.0	Clear water
1100	4.70	200	5.33	0.068	0.0	3.88	14.98	213	0.0	
1105	4.70	200	5.28	0.068	0.0	2.99	14.93	226	0.0	
1115	4.70	200	5.20	0.067	0.0	2.69	14.84	246	0.0	
1125	4.70	200	5.15	0.064	0.0	2.35	15.21	233	0.0	
1130	4.70	200	5.13	0.062	0.0	2.03	15.26	176	0.0	
1135	4.70	200	5.12	0.060	0.0	1.91	15.24	170	0.0	
1140	4.70	200	5.11	0.060	0.0	1.84	15.33	167	0.0	

All parameters Stabilize

Sampling Begins

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW90B-042313
Sample Location: MW90B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/23/13								
Time: 1030								
Method: Peri Pump	Clear	11.41	4.63	16.13	6.05	0.00	–	-83

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/23/13								
Method: Peri Pump								
Monitor Reading (ppm): –								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 38.92								
Static Water Level (WL): 7.04								
One Casing Volume(gal/L):								
Start Purge (hrs): 0940								
End Purge (hrs): 1055								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 3gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	None	2-1L Ambers	✓
Perchlorate	None	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795

WELL ID.: MRC-MW90B-042313
DATE: 4/23/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0940	7.04	—	—	—	—	—	—	—	—	
0945	8.22	200	11.33	3.66	65.9	1.32	16.50	-87	—	
0950	8.63	200	11.42	3.89	73.2	1.02	16.37	-79	—	
0955	8.83	200	11.51	4.22	80.7	0.00	16.23	-76	—	
1000	9.11	200	11.49	4.56	75.9	0.00	16.03	-75	—	
1005	9.16	200	11.50	4.56	53.2	0.00	16.01	-74	—	
1010	9.22	200	11.52	4.56	34.6	0.00	15.98	-74	—	
1015	9.28	200	11.50	4.58	21.4	0.00	15.99	-75	—	
1020	9.32	200	11.46	4.62	12.34	0.00	16.07	-76	—	
1025	9.36	200	11.44	4.63	9.24	0.00	16.09	-81	—	
1030	9.38	200	11.41	4.63	6.05	0.00	16.13	-83	—	
Sample	VOCs, Perchlorate, & 1,4-Dioxane									

SIGNATURE(S): AC

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

Sample ID No.: MRC-MW91A-042313
Sample Location: MW91A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/23/13								
Time: 1200								
Method: Peri Pump	Clear	6.39	2.08	17.57	1126	0.00	—	89

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/23/13		See Low Flow Purge Data Sheet						
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 17.96								
Static Water Level (WL): 9.32								
One Casing Volume(gal/L):								
Start Purge (hrs): 1100								
End Purge (hrs): 1210								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected ✓
1,4-Dioxane	—	2-1L Amber	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795

WELL ID.: MKC-MW91A-042313
DATE: 4/23/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1100	9.37	—	—	—	—	—	—	—	—	
1105	10.02	200	8.35	2.09	1216	0.05	16.81	152	—	
1110	10.41	150	7.84	2.07	974	0.00	16.84	178	—	
1115	10.42	150	6.92	2.06	124	0.00	16.91	183	—	
1120	10.43	150	6.81	2.05	103.9	0.00	16.94	207	—	
1125	10.67	150	6.72	2.04	93.4	0.00	12.06	184	—	
1130	11.12	150	6.46	2.03	64	0.00	17.12	176	—	
1135	11.22	150	6.44	2.04	123	0.00	17.18	152	—	
1140	11.53	150	6.43	2.04	734	0.00	17.23	142	—	
1145	11.62	150	6.41	2.06	163	0.00	17.36	123	—	
1150	11.78	150	6.34	2.07	984	0.00	17.57	98	—	
1155	12.06	150	6.39	2.08	1069	0.00	17.57	92	—	
1200	12.14	150	6.39	2.08	1126	0.00	17.57	89	—	
Sampling for 1,4-Dioxane										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-92C-043013
Sample Location: MW-92C
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-30-13 5-2-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 0940								
Method: Monsoon pump	Cloudy	8.45	0.276	20.14	>999	3.20	0.1	ORP 50

PURGE DATA:

Date: 4-30-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Monsoon pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SEE Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 9.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 1225								
End Purge (hrs): 1356								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 15.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3x3 - 40 ml VOA	5-2-13
~~Metals~~			
TAL Metals	HNO3	3x1 - 500 ml Poly	↓

OBSERVATIONS / NOTES:

MS/MSD Collected

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112EC04795-02

WELL ID.: MRC-MW-92C-043013
DATE: 4-30-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1225	9.90	300	—	—	—	—	—	—	—	Initial, no odor
1226	9.45	300	5.99	0.312	>999	1.31	17.95	-91	0.1	Cloudy water
1231	12.50	150	5.37	0.313	409	0.82	19.12	-76	0.1	
1236	14.05	100	5.24	0.313	328	0.92	18.05	-68	0.1	
1246	18.95	100	5.29	0.305	92.6	1.46	18.41	-60	0.1	
1256	25.40	100	5.71	0.270	142	2.33	19.79	-52	0.1	
1306	29.35	100	7.19	0.266	306	3.17	19.10	-112	0.1	
1316	34.40	100	9.28	0.269	242	3.68	19.79	-26	0.1	
1326	40.40	100	9.46	0.262	>999	3.41	20.46	-32	0.1	
1336	60.30	100	9.36	0.305	49.3	4.50	20.54	-15	0.1	
1346	70.00	100	9.05	0.304	41.0	4.83	20.57	5	0.1	
1351	70.25	100	8.84	0.282	223	3.31	20.25	28	0.1	
1356	Dry	100	9.45	0.276	145	3.20	20.14	50	0.1	

Well went dry left Recharge 80%
before Sampling

SIGNATURE(S): Matt Pa

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Canton
Project No.: 112SC04785-02

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

Sample ID No.: MRC-MW-93A-032113
Sample Location: MW-93A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-21-13 / Time: 1600 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Slightly	6.46	3.05	13.16	15.1	5.28	1.6	86

PURGE DATA:

Date: 3-19-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See low flow purge					
Static Water Level (WL): 7.75								
One Casing Volume(gal/L):				Data	Sheet			
Start Purge (hrs): 1252								
End Purge (hrs): 1338								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓ 3-21
Total metals	HNO3	1 - 500 ml Poly	✓ ↓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt Re

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-93A-031913
DATE: 3-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1252	7.75	300	—	—	—	—	—	—	—	Initial, no odor
1253	9.10	200	5.31	4.04	20.9	7.48	14.14	200	2.1	Slighty Cloudy
1258	8.40	200	5.73	4.05	28.5	4.02	13.38	208	2.1	↓
1303	8.60	150	5.98	3.82	20.2	3.77	13.27	201	2.0	↓
1308	9.23	100	6.22	3.46	15.6	4.34	13.16	180	1.8	↓
1313	9.90	100	6.42	3.12	11.0	4.76	13.09	159	1.6	↓
1318	10.40	100	6.60	2.79	4.0	5.35	12.98	134	1.4	Clean water
1323	10.75	100	6.69	2.57	3.2	6.02	12.73	118	1.3	↓
1328	11.40	100	6.65	2.68	14.0	5.93	13.03	110	1.4	Slighty Cloudy
1333	12.00	100	6.46	3.05	15.1	5.28	13.16	86	1.6	
1338	←				Dry				→	

Let Recharge 80% before Sample is Collected

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112FC04795-02

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

Sample ID No.: MRC-MW-930-043013
Sample Location: MW-930
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-30-13								
Time: 1520								
Method: Monsoon pump	Slight	10.22	0.527	16.66	45.6	7.89	0.3	-34

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-30-13								
Method: Monsoon pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 8.25			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1429								
End Purge (hrs): 1515								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 9.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-930-043013
DATE: 4-30-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1429	8.25	300	—	—	—	—	—	—	—	Initial, no odor
1430	9.20	300	10.14	0.503	65.0	10.44	16.74	-123	0.2	Slightly cloudy
1435	8.70	300	10.22	0.519	23.9	9.45	16.75	-77	0.2	
1440	8.60	300	10.25	0.522	22.8	8.97	16.87	-61	0.3	
1450	8.60	300	10.22	0.527	30.7	8.48	16.74	-48	0.3	
1500	8.60	300	10.24	0.525	35.0	8.37	16.74	-48	0.3	
1505	8.60	300	10.23	0.524	44.0	7.98	16.75	-38	0.3	
1510	8.60	300	10.19	0.526	45.0	7.93	16.66	-35	0.3	
1515	8.60	300	10.22	0.527	45.6	7.89	16.66	-34	0.3	
			Well parameters Stabilize							
			Sampling		Begins					

SIGNATURE(S): Walt P

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112FC04785-02

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

Sample ID No.: MRC-MW-94B-032013
Sample Location: MW-94B
Sampled By: HP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-20-13								
Time: 1535								
Method: Peristaltic pump	Clear	7.03	0.694	13.40	0.0	4.47	0.3	209

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-20-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	low	flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 4.84			Data	sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1443								
End Purge (hrs): 1530								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 111FC04795-02
WELL ID.: MRC-MW-94B-032013
DATE: 3-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1443	4.84	300	—	—	—	—	—	—	—	Initial, no odor
1445	5.07	300	5.89	0.747	0.0	5.03	14.38	286	0.4	Clean water
1450	5.07	200	6.10	0.798	0.0	4.69	14.27	277	0.4	
1455	5.07	200	6.65	0.811	0.0	4.61	13.89	250	0.4	
1505	5.07	200	6.94	0.777	0.0	4.57	13.63	228	0.4	
1515	5.07	200	7.01	0.737	0.0	4.52	13.42	215	0.4	
1520	5.07	200	7.02	0.714	0.0	4.48	13.40	214	0.4	
1525	5.07	200	7.01	0.700	0.0	4.47	13.39	211	0.3	
1530	5.07	200	7.03	0.694	0.0	4.47	13.40	209	0.3	
			Well parameters stabilized							
			Sampling Begins							

SIGNATURE(S): Walt Re

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112E04795-02

Sample ID No.: MRC-MW-940-043013
Sample Location: MW-940
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-30-13 / Time: 1131	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Method: Mansoon pump	Clear	4.04	0.027	15.91	0.0	2.50	0.0	307

PURGE DATA:

Date: 4-30-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Mansoon pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 10.35			Data	sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1040								
End Purge (hrs): 1126								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 7.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: 94D MRC-MW-96 -043013
DATE: 4-30-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1040	10.35	300	—	—	—	—	—	—	—	Initial, no odor Clean water
1041	10.95	300	4.42	0.030	1.1	3.55	15.98	297	0.0	
1046	10.40	300	4.32	0.029	0.0	2.95	16.06	297	0.0	
1051	10.60	300	4.20	0.028	0.0	2.77	16.13	300	0.0	
1101	10.60	300	4.15	0.028	0.0	2.64	16.01	300	0.0	
1111	10.60	300	4.08	0.028	0.0	2.66	15.96	303	0.0	
1116	10.60	300	4.06	0.028	0.0	2.53	16.01	304	0.0	
1121	10.60	300	4.05	0.027	0.0	2.47	16.00	305	0.0	
1126	10.60	300	4.04	0.027	0.0	2.50	15.96	307	0.0	

Well Parameters Stabilize

Sampling Begins

PAGE 2 OF 2

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EL04795-02

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

Sample ID No.: MRC-MW-95B-031913
Sample Location: MW-95B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-19-13 / Time: 1027 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	6.22	0.259	14.90	0.0	3.56	0.1	106

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-19-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge						
Total Well Depth (TD):								
Static Water Level (WL): 4.00			Data sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 0935								
End Purge (hrs): 1022								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3x3=9-40 ml vial	✓

OBSERVATIONS / NOTES:

MS/MSD Collected

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pa

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle Riven Center
PROJECT NUMBER: 112ICO

WELL ID.: MRC-MW-95B-031913
DATE: 3-19-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0935	4.00	300	—	—	—	—	—	—	—	Initial, no odor
0937	4.65	300	4.94	0.211	15.4	7.85	15.08	258	0.1	Slightly Cloudy
0942	4.90	250	5.78	0.201	1.0	5.10	14.61	212	0.1	Clear water
0947	4.90	180	5.98	0.233	0.0	4.30	14.57	165	0.1	
0957	4.90	180	6.13	0.249	0.0	3.82	14.66	124	0.1	
1007	4.90	180	6.19	0.252	0.0	3.82	14.51	114	0.1	
1012	4.90	180	6.19	0.255	0.0	3.56	14.62	110	0.1	
1017	4.90	180	6.20	0.257	0.0	3.60	14.84	109	0.1	
1022	4.90	180	6.22	0.259	0.0	3.56	14.90	106	0.1	

Well parameters Stabilize

Sampling Begins

SIGNATURE(S): Walt P

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112E004795-02

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

Sample ID No.: MRC-MW-95D-050113
Sample Location: MW-95D
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-1-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1456								
Method: Monsoon pump	Clear	7.09	0.028	14.69	0.0	6.10	0.0	361

PURGE DATA:

Date: 5-1-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Monsoon pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 0.40			Data sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1405								
End Purge (hrs): 1451								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 9.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04725-02
WELL ID.: MRC-MW-95D-050113
DATE: 5-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1405	0.40	~~300~~	~~2.73~~	~~0.033~~	~~9.6~~	~~7.30~~	~~15.77~~	~~290~~	~~0.0~~	Initial, Modera
1406		300	2.73	0.033	9.6	7.30	15.77	290	0.0	Clear water
1411		300	2.68	0.029	0.0	6.40	14.57	300	0.0	
1416		300	2.35	0.029	0.0	6.23	14.62	327	0.0	
1426		300	1.99	0.029	0.0	6.10	14.73	356	0.0	
1436		300	1.93	0.028	0.0	6.04	14.70	364	0.0	
1441		300	2.07	0.028	0.0	6.06	14.70	360	0.0	
1446		300	2.07	0.028	0.0	6.08	14.69	361	0.0	
1451	↓	300	2.09	0.028	0.0	6.10	14.69	361	0.0	
			Well	parameters		Stabilize				
				Sampling		Begins				

SIGNATURE(S): Matt Pa

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-96A-032713
Sample Location: MW-96A
Sampled By: NP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-27-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0943	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	4.40	0.911	15.42	0.0	0.67	0.4	241

PURGE DATA:

Date: 3-27-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 12.90								
One Casing Volume(gal/L):								
Start Purge (hrs): 0852								
End Purge (hrs): 0938								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-96A-032713
DATE: 3-27-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0852	12.90	300	—	—	—	—	—	—	—	Initial, no odor
0853	13.12	300	4.03	0.935	11.3	1.95	16.48	245	0.5	Slightly cloudy
0858	13.40	200	4.13	0.904	3.3	1.09	15.59	252	0.4	Clear Water
0903	13.72	150	4.14	0.900	1.3	0.86	15.49	267	0.4	
0913	14.45	100	4.16	0.898	0.0	0.74	15.35	272	0.4	
0923	15.25	100	4.31	0.911	0.0	0.68	15.29	253	0.4	
0928	15.48	100	4.33	0.913	0.0	0.69	15.26	245	0.4	
0933	15.55	100	4.39	0.912	0.0	0.68	15.38	242	0.4	
0938	15.60	100	4.40	0.911	0.0	0.67	15.42	241	0.4	
				Well parameters Stabilize						
				Sampling Begins						

SIGNATURE(S): W

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-96B-032713
Sample Location: MW-96B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 3-27-13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1054	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	4.77	3.19	16.80	0.0	0.76	1.6	293

PURGE DATA:

Date: 3-27-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SEE Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 15.82								
One Casing Volume(gal/L):								
Start Purge (hrs): 1003								
End Purge (hrs): 1049								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-96B-032713
DATE: 3-27-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1003	15.82	300	—	—	—	—	—	—	—	Initial, no odor
1004	16.07	300	4.45	3.22	0.9	2.80	16.07	278	1.7	Clear water
1009	16.00	200	4.49	3.52	0.0	1.33	16.21	347	1.8	
1014	16.00	200	4.52	3.60	0.0	1.02	16.41	347	1.9	
1024	16.00	200	4.58	3.65	0.0	0.79	16.53	322	1.9	
1034	16.00	200	4.63	3.45	0.0	0.60	16.43	311	1.8	
1039	16.00	200	4.67	3.23	0.0	0.70	16.69	303	1.7	
1044	16.00	200	4.73	3.22	0.0	0.69	16.83	296	1.6	
1049	16.00	200	4.77	3.19	0.0	0.70	16.80	293	1.6	
			Well parameters stabilize							
			Sampling Begins							

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04285-02

Sample ID No.: MRC-MW-96D-050613
Sample Location: MW-96D
Sampled By: VP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

Date: 5-6-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1455								
Method: ~~Peristaltic~~ Monsoon	Clear	7.89	0.023	14.72	0.0	5.09	0.0	324

PURGE DATA:

Date: 5-6-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Monsoon pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): Top of Pump								
One Casing Volume(gal/L):								
Start Purge (hrs): 1404								
End Purge (hrs): 1450								
Total Purge Time (min): 1 hr 46								
Total Vol. Purged (gal/L): 11.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04785-02

WELL ID.: MRC-MW-960-050613
DATE: 5-6-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1404	Top of PR	300	—	—	—	—	—	—	—	Initial, Muddy
1405	↓	300	4.13	0.047	0.0	4.41	14.74	204	0.0	Clean Water
1410		300	4.15	0.044	0.0	4.89	14.58	216	0.0	↓
1415		300	3.70	0.037	0.0	4.69	14.85	246	0.0	
1425		300	3.64	0.029	0.0	4.68	14.89	264	0.0	
1435		300	3.13	0.024	0.0	4.69	14.76	302	0.0	
1440		300	2.88	0.023	0.0	4.99	14.73	319	0.0	
1445		300	2.86	0.023	0.0	5.02	14.74	323	0.0	
1450	↓	300	2.89	0.023	0.0	5.09	14.72	324	0.0	↓
	=	Well parameters			Stabilized				=	
	=	Sampling			Begins				=	

SIGNATURE(S): Walt B

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW98A-042913
Sample Location: MW98A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/29/13								
Time: 1225								
Method: Peri Pump	Clear	6.71	0.670	14.42	10.04	0.00	—	184

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/29/13								
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 14.80								
Static Water Level (WL): 5.87								
One Casing Volume(gal/L):								
Start Purge (hrs): 1140								
End Purge (hrs): 1255								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL Vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795
WELL ID.: MRC-MW98A-042913
DATE: 4/29/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1140	5.87	—	—	—	—	—	—	—	—	
1145	6.12	150	6.44	0.745	28.4	1.86	15.52	-39	—	
1150	6.20	150	6.55	0.735	25.6	1.32	15.34	-35	—	
1155	6.40	150	6.68	0.716	26.0	0.69	14.93	28	—	
1200	6.53	150	6.63	0.689	18.6	0.06	14.86	61	—	
1205	6.61	150	6.70	0.674	13.9	0.00	14.60	75	—	
1210	6.86	150	6.70	0.673	13.8	0.00	14.57	83	—	
1215	7.02	150	6.70	0.672	13.7	0.00	14.51	94	—	
1220	7.13	150	6.71	0.678	11.3	0.00	14.48	97	—	
1225	7.24	150	6.71	0.670	10.04	0.00	14.42	104	—	
Sampling for VOCs, Total Metals, 1,4-Dioxane										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112W04795

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

Sample ID No.: MRCMW98B-042913
Sample Location: MW98B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/29/13								
Time: 1420								
Method: Peri Pump	Clear	4.79	0.793	15.71	3.68	0.00	-	189

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/29/13								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 36.84								
Static Water Level (WL): 14.01								
One Casing Volume(gal/L):								
Start Purge (hrs): 1345								
End Purge (hrs): 1440								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112G04795

WELL ID.: MRC-MW98B-042913
DATE: 4/29/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1345	14.01	—	—	—	—	—	—	—	—	
1350	14.66	250	6.03	0.779	6.79	0.47	15.51	80	—	
1355	16.04	150	4.83	0.789	5.35	0.00	15.62	184	—	
1400	16.53	150	4.82	0.791	5.03	0.00	15.63	185	—	
1405	17.02	150	4.81	0.792	4.40	0.00	15.67	186	—	
1410	17.41	150	4.80	0.792	4.17	0.00	15.69	187	—	
1415	17.88	150	4.79	0.792	5.46	0.00	15.74	188	—	
1420	18.12	150	4.79	0.793	3.68	0.00	15.71	189	—	
Sampling for VOCs, Total Metals, & 1,4-Dioxane										

SIGNATURE(S): _____

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW100A-043013
Sample Location: MW100A
Sampled By: SRL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/30/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1045	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.84	0.472	16.83	31.6	0.00	—	179

PURGE DATA:

Date: 4/30/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 18.48								
Static Water Level (WL): 9.52								
One Casing Volume(gal/L):								
Start Purge (hrs): 1010								
End Purge (hrs): 1105								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MKC
PROJECT NUMBER: 112I04795

WELL ID.: MRC-MW100A-043013
DATE: 4/30/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1010	9.52	—	—	—	—	—	—	—	—	
1015	9.84	150	5.67	0.493	94.6	0.00	16.80	214	—	
1020	10.02	150	5.73	0.484	75.7	0.00	16.77	208	—	
1025	10.21	150	5.78	0.476	44.1	0.00	16.72	199	—	
1030	10.43	150	5.81	0.475	39.0	0.00	16.77	194	—	
1035	10.52	150	5.82	0.474	32.1	0.00	16.79	186	—	
1040	10.70	150	5.84	0.473	30.1	0.00	16.83	181	—	
1045	10.43	150	5.84	0.472	31.6	0.00	16.83	179	—	
Sampling for VOCs + 1,4-Dioxane										

SIGNATURE(S):

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795

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

Sample ID No.: MRC-MW100B-042013
Sample Location: MW100B
Sampled By: SBL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/30/13								
Time: 1150								
Method: Peri Pump	Clear	5.36	0.282	18.13	46.4	0.00	-	71

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/30/13								
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 35.62			Purge Data Sheet					
Static Water Level (WL): 14.88								
One Casing Volume(gal/L):								
Start Purge (hrs): 1120								
End Purge (hrs): 1215								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
1,4-Dioxane	—	2-1L Ambers	✓
Total Metals	HNO3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795
WELL ID.: MRC-MW100R-043013
DATE: 4/30/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1120	14.88	—	—	—	—	—	—	—	—	
1125	15.55	200	5.85	0.280	75	0.00	17.73	79	—	
1130	16.35	200	5.36	0.282	92.0	0.00	17.90	74	—	
1135	17.05	200	5.36	0.282	54.7	0.00	17.97	73	—	
1140	17.79	200	5.36	0.282	46.5	0.00	18.04	72	—	
1145	18.48	200	5.36	0.282	45.4	0.00	18.10	72	—	
1150	19.25	200	5.36	0.282	46.4	0.00	18.13	71	—	
Sampling for VOCs, Methyl, & 1,4-Dioxane										

SIGNATURE(S): [signature]

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW101A-032013
Sample Location: MW101A
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/20/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 0925	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.17	0.560	13.28	6.47	0.82	0.1	34

PURGE DATA:

Date: 3/20/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 17.81								
Static Water Level (WL): 14.78								
One Casing Volume(gal/L):								
Start Purge (hrs): 0855								
End Purge (hrs): 0930								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 1gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 111C04795-02

WELL ID.: MRC-MW101A-032013
DATE: 3/20/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0855	14.78	—	—	—	—	—	—	—	—	
0900	15.28	100	5.26	0.521	24.7	0.83	16.08	40	0.1	
0905	15.62	100	5.23	0.533	10.63	0.82	15.06	36	0.1	
0910	15.94	100	5.19	0.540	4.85	0.82	14.36	35	0.1	
0915	16.26	100	5.17	0.533	7.38	0.82	14.08	36	0.1	
0920	16.54	100	5.15	0.529	5.10	0.82	13.73	40	0.1	
0925	16.83	100	5.17	0.560	6.47	0.82	13.28	34	0.1	
Sampling for VOCs										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112G04795-02

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

Sample ID No.: MRC-MW101B-032013
Sample Location: MW101B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/20/13	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1035	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Slightly Cloudy	4.86	0.177	13.59	65.8	0.83	0.0	176

PURGE DATA:

Date: 3/20/13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 35.74								
Static Water Level (WL): 14.31								
One Casing Volume(gal/L):								
Start Purge (hrs): 0935								
End Purge (hrs): 1040								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW101B-032013
DATE: 3/20/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0935	14.31	150	5.07	0.281	62.9	1.52	12.76	45	0.1	
0940	15.34	150	5.02	0.259	63.1	1.26	13.05	57	0.1	
0945	15.89	200	4.98	0.231	67.2	1.13	13.21	86	0.1	
0950	16.23	200	4.91	0.208	73.8	0.95	13.48	102	0.0	
0955	18.20	200	4.92	0.203	73.4	0.82	13.42	116	0.0	
1000	19.64	200	4.93	0.198	73.2	0.89	13.39	124	0.0	
1005	20.32	200	4.89	0.189	71.1	0.85	13.42	136	0.0	
1010	20.91	200	4.88	0.185	65.6	0.84	13.39	147	0.0	
1015	21.38	200	4.88	0.185	71.2	0.83	13.60	153	0.0	
1020	22.62	200	4.87	0.181	76.4	0.82	13.60	161	0.0	
1025	23.82	200	4.86	0.179	73.1	0.83	13.59	173	0.0	
1030	24.62	200	4.86	0.177	65.8	0.83	13.59	176	0.0	
1035	25.54									
Sampling for VOCs										

PAGE 1 OF 1

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW102A-032013
Sample Location: MW102A
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/20/13								
Time: 1205								
Method: Peri Pump	Slightly Cloudy	5.49	1.16	12.13	30.4	0.83	0.3	-67

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/20/13								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 16.03								
Static Water Level (WL): 10.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1210								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2.5 gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW102A-032013
DATE: 3/20/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1105	10.11	—	—	—	—	—	—	—	—	
1110	10.23	150	5.61	1.13	19.5	0.77	12.52	-39	0.3	
1115	10.84	150	5.59	1.13	16.4	0.77	12.35	-41	0.3	
1120	11.02	150	5.58	1.13	11.3	0.77	12.27	-49	0.3	
1125	11.36	150	5.57	1.12	13.4	0.78	12.16	-53	0.3	
1130	11.55	150	5.56	1.10	17.3	0.79	12.08	-56	0.3	
1135	11.89	150	5.53	1.11	19.2	0.78	12.06	-58	0.3	
1140	12.08	150	5.49	1.12	20.0	0.53	12.04	-62	0.3	
1145	12.39	150	5.50	1.13	23.1	0.86	12.03	-64	0.3	
1150	12.62	150	5.50	1.14	26.2	0.83	12.02	-65	0.3	
1155	12.13	150	5.49	1.16	28.7	0.82	12.04	-65	0.3	
1200	13.83	150	5.48	1.16	29.2	0.82	12.05	-66	0.3	
1205	13.99	150	5.48	1.16	30.4	0.83	12.13	-67	0.3	
Sampling for VOCs										

SIGNATURE(S):

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GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112C04795-02

Sample ID No.: MRC-MW102B-032013
Sample Location: MW102B
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3/20/13								
Time: 1320								
Method: Peri Pump	Clear	4.60	0.136	14.60	1.82	2.06	0.0	261

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3/20/13								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 35.98								
Static Water Level (WL): 11.25								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1330								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3 gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW102B-032013
DATE: 3/20/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	11.25	—	—	—	—	—	—	—	—	
1225	11.91	200	4.48	0.170	100	1.92	13.62	93	0.0	
1230	12.42	200	4.46	0.155	63.2	1.63	14.10	103	0.0	
1235	13.68	150	4.44	0.156	22.4	1.09	14.20	148	0.0	
1240	14.36	150	4.49	0.149	12.1	1.53	14.20	153	0.0	
1245	15.78	150	4.51	0.144	7.26	1.68	14.19	166	0.0	
1250	17.11	150	4.52	0.140	4.23	1.90	14.23	193	0.0	
1255	18.31	150	4.52	0.137	3.92	2.08	14.27	214	0.0	
1300	19.22	150	4.53	0.137	3.62	2.09	14.31	224	0.0	
1305	20.64	150	4.56	0.137	3.48	2.09	14.40	239	0.0	
1310	22.20	150	4.57	0.138	2.94	2.08	14.50	245	0.0	
1315	23.11	150	4.58	0.138	2.63	2.05	14.54	258	0.0	
1320	24.61	150	4.60	0.136	1.82	2.06	14.60	261	0.0	
Sampling for VOCs and Total metals										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04785-02

Sample ID No.: MRC-MW-103A-032713
Sample Location: MW-103A
Sampled By: WP
C.O.C. No.:

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

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other orp
Date: 3-27-13								
Time: 1437								
Method: Peristaltic pump	Clear	4.57	0.043	12.87	0.0	3.46	0.0	382

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-27-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge data sheet						
Total Well Depth (TD):								
Static Water Level (WL): 3.44								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1432								
Total Purge Time (min): 92								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
PCBs	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-103A-032713
DATE: 5-27-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	3.44	300	—	—	—	—	—	—	—	Initial no odor
1302	4.10	300	4.89	0.113	3.9	4.80	14.14	303	0.1	Clear water
1307	4.85	200	4.65	0.091	2.3	4.14	13.66	324	0.0	
1312	5.38	150	4.62	0.087	1.2	3.92	13.64	329	0.0	
1322	6.27	100	4.48	0.098	5.4	3.77	13.88	356	0.0	
1332	6.35	100	4.74	0.091	2.7	3.33	14.52	353	0.0	
1342	6.55	100	4.69	0.087	0.1	3.25	14.58	362	0.0	
1347	6.60	100	4.71	0.087	0.0	3.05	14.84	354	0.0	
1352	6.67	100	4.50	0.092	0.0	3.59	14.29	370	0.0	
1357	6.80	100	4.66	0.081	0.0	3.25	14.67	364	0.0	
1407	7.00	100	4.47	0.094	0.0	3.71	13.41	380	0.0	
1417	7.35	100	4.51	0.093	0.0	3.58	13.38	375	0.0	
1427	7.67	100	4.49	0.083	0.0	3.57	12.95	384	0.0	
1432	7.90	100	4.51	0.083	0.0	3.46	12.87	382	0.0	
			Well did not stabilize after 90 min max purge push Pack plan Sampling Begins							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-103B-032713
Sample Location: MW-103B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-27-13								
Time: 1537								
Method: Peristaltic pump	Clear	5.08	0.058	14.19	0.0	1.88	0.0	156

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-27-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SCR	low	flow	purge		
Total Well Depth (TD):			Data		Sheet			
Static Water Level (WL): 5.00								
One Casing Volume(gal/L):								
Start Purge (hrs): 1447								
End Purge (hrs): 1533								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
PCBs	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112C04795-02

WELL ID.: Mac-pw-103B-032713
DATE: 3-27-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1447	5.00	300	—	—	—	—	—	—	—	Initial, no odor
1448	5.75	300	4.92	0.060	0.0	1.34	14.40	186	0.0	Clear water
1453	6.30	200	4.93	0.059	0.0	1.18	14.42	182	0.0	
1458	6.72	100	4.98	0.058	0.0	0.91	14.37	176	0.0	
1508	7.30	100	5.02	0.057	0.0	0.75	14.25	175	0.0	
1518	7.62	100	4.98	0.057	0.0	2.08	14.40	200	0.0	
1523	7.72	100	5.01	0.057	0.0	2.12	14.54	202	0.0	
1528	7.72	100	5.03	0.057	0.0	2.00	14.37	200	0.0	
1533	7.72	100	5.08	0.058	0.0	1.98	14.19	196	0.0	

Well parameters stabilize

Sampling Begins

PAGE 2 OF 2

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04795-02

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

Sample ID No.: MRC-MW-104A-032113
Sample Location: MW-104A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-13								
Time: 1053								
Method: Peristaltic pump	Clear	5.40	2.17	10.20	6.6	3.13	1.1	264

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge data sheet						
Total Well Depth (TD):								
Static Water Level (WL): 4.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1001								
End Purge (hrs): 1048								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Walt Pz

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Centra
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-104A-032113
DATE: 3-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1001	7.50	300	—	—	—	—	—	—	—	Initial, no odor
1003	5.12	300	5.06	2.17	604	4.12	11.75	211	1.1	Cloudy water
1008	5.56	200	5.23	2.17	141	3.64	10.96	237	1.1	↓
1013	5.85	150	5.26	2.16	82.0	3.48	10.90	249	1.1	Slightly cloudy
1023	6.62	120	5.28	2.18	32.2	3.36	10.59	261	1.1	↓
1033	7.50	100	5.32	2.17	17.4	3.21	10.56	259	1.1	↓
1038	~~7.80~~ 7.60	100	5.35	2.17	6.2	3.17	10.18	264	1.1	Clear water
1043	7.70	100	5.39	2.17	6.4	3.15	10.16	265	1.1	
1048	7.80	100	5.40	2.17	6.6	3.13	10.20	264	1.1	↓

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112EC04725-02

Sample ID No.: MRC-MW-104B-032113
Sample Location: MW-104B
Sampled By: WP
C.O.C. No.:

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

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

SAMPLING DATA:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-21-13								
Time: 1149								
Method: Peristaltic pump	Clear	4.74	2.61	10.83	8.1	0.95	1.3	360

PURGE DATA:	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-21-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 5.45								
One Casing Volume(gal/L):								
Start Purge (hrs): 1057								
End Purge (hrs): 1144								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION: Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Centra
PROJECT NUMBER: 112F04795-02

WELL ID.: MRC-MW-104B-032113
DATE: 3-21-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1057	5.45	300	—	—	418	2.05	11.14	273	1.3	Initial, no odor Cloudy water
1059	5.60	300	4.91	2.57	112	1.49	10.72	333	1.3	
1104	5.61	100	4.75	2.59	58.2	1.32	10.68	345	1.3	
1109	5.63	100	4.73	2.58	22.5	1.09	10.82	356	1.3	
1119	5.65	100	4.74	2.59	9.3	1.10	10.97	362	1.3	Clean water
1129	5.67	100	4.75	2.60	8.2	0.97	10.89	362	1.3	
1134	5.67	100	4.74	2.61	8.0	0.96	10.73	361	1.3	
1139	5.68	100	4.75	2.61	8.1	0.95	10.83	360	1.3	
1144	5.68	100	4.74	2.61						
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW105A-032013
Sample Location: MW-105A
Sampled By: JWP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3-20-13 / Time: 1032 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	5.73	1.21	12.49	0.0	1.38	0.6	260

PURGE DATA:

Date: 3-20-13 / Method: Peristaltic pump	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 4.25				data	sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 0940								
End Purge (hrs): 1027								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
~~VOCs~~	~~HCl~~	~~3 - 40 ml VOA~~	~~✓~~
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112G04795-02
WELL ID.: MRC-MW-105A-032013
DATE: 3-20-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0940	4.25	300	—	—	—	—	—	—	—	Initial, no odor
0942	4.90	300	5.41	0.992	0.0	2.62	13.03	263	0.5	Clear water
0947	5.23	200	5.58	1.00	0.0	2.13	11.84	253	0.5	
0952	5.40	200	5.62	1.03	0.0	1.94	11.69	257	0.5	
1002	5.40	180	5.64	1.06	0.0	1.79	11.56	262	0.5	
1012	5.40	180	5.66	1.15	0.0	1.64	11.69	264	0.6	
1017	5.40	180	5.70	1.17	0.0	1.51	12.18	263	0.6	
1022	5.40	180	5.72	1.19	0.0	1.43	12.43	260	0.6	
1027	5.40	180	5.73	1.21	0.0	1.38	12.49	260	0.6	
			Well Parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795

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

Sample ID No.: MRC-MW106B/C-040113
Sample Location: MW106 B/C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/1/13	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Time: 1335								
Method: Peri Pump	Clear	5.42	0.247	16.47	9.63	2.09	0.0	174

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/1/13								
Method: Peri Pump								
Monitor Reading (ppm): —		See Low Flow						
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 49.96		Purge Data Sheet						
Static Water Level (WL): 3.22								
One Casing Volume(gal/L):								
Start Purge (hrs): 1360								
End Purge (hrs): 1340								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW106B/C-040113
DATE: 4/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	3.22	–	–	–	–	–	–	–	–	
1305	5.55	250	5.51	0.252	45.3	2.36	16.54	114	0.1	
1310	6.81	250	5.48	0.250	38.4	2.21	16.55	121	0.0	
1315	7.76	250	5.45	0.249	22.7	2.15	16.56	148	0.0	
1320	8.43	200	5.46	0.248	20.1	2.11	16.55	153	0.0	
1325	9.42	200	5.47	0.248	16.6	2.08	16.54	161	0.0	
1330	10.41	200	5.44	0.247	13.6	2.09	16.49	171	0.0	
1335	11.47	200	5.42	0.247	9.63	2.09	16.47	174	0.0	
Sampling for VOCs										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MRC
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW1078/C-040113
Sample Location: MW1078/C
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/1/13								
Time: 1430								
Method: Peri Pump	Clear	5.46	0.083	17.22	8.40	2.15	0.0	220

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/1/13								
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 55.35								
Static Water Level (WL): 0.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 1350								
End Purge (hrs): 1410								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MRC
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW107B/C-040113
DATE: 4/1/13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1350	0.20	–	–	–	–	–	–	–	–	
1355	1.30	100	5.53	0.096	36.6	3.71	18.47	192	0.0	
1400	1.97	150	5.46	0.091	12.1	2.46	18.21	202	0.0	
1405	3.01	150	5.46	0.089	11.4	2.31	18.04	208	0.0	
1410	4.35	150	5.47	0.087	8.93	2.12	17.71	211	0.0	
1415	5.23	150	5.47	0.086	7.98	2.13	17.62	214	0.0	
1420	5.84	150	5.46	0.085	7.12	2.13	17.42	217	0.0	
1425	6.54	150	5.46	0.084	7.63	2.14	17.31	219	0.0	
1430	7.77	150	5.46	0.083	8.40	2.15	17.22	220	0.0	
Sampling for VOCs and Total Metals										

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-109A-040113
Sample Location: MW-109A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

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

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-1-13								
Time:								
Method: Peristaltic pump	Slightly	5.09	0.347	15.90	64.0	1.05	0.2	117

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-1-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 13.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 0949								
End Purge (hrs): 0955								
Total Purge Time (min): 6								
Total Vol. Purged (gal/L): 0.2								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
Perchlorate	—	1 - 250 ml Poly	
Total metals	HNO3	1 - 500 ml Poly	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112TC04795-02

WELL ID.: MRC-MW-109A-040113
DATE: 4-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0949	13.20	300	—	—	—	—	—	—	—	Initial, moderate
0950	13.58	300	4.66	0.370	58.2	2.58	15.60	177	0.2	Slightly cloudy
0955	14.00	200	5.09	0.347	64.0	1.05	15.90	117	0.2	
1000				Dry						
1016										
1020										
			Let	Recharge	90%	before	Sampling			

SIGNATURE(S): Matt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112I04795-02

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

Sample ID No.: MRC-MW-109B-040113
Sample Location: MW-109B
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-1-13								ORP
Time: 1105								
Method: Peristaltic pump	Clear	5.98	1.11	16.25	0.0	1.18	0.6	100

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-1-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 16.50			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1004								
End Purge (hrs): 1100								
Total Purge Time (min): 56								
Total Vol. Purged (gal/L): 2.2								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	

Signature(s): Walt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 102IC04795-02
WELL ID.: MRC-MW-109B-040113
DATE: 4-1-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1004	16.50	200	—	—	—	—	—	—	—	Initial, no odor
1005	16.55	200	5.22	1.80	42.0	3.22	16.64	130	0.9	Slightly Cloudy
1010	16.55	200	5.08	1.87	22.4	2.76	16.32	153	0.9	↓
1015	16.55	200	5.14	1.84	16.3	1.43	16.15	149	0.9	↓
1025	16.55	200	5.41	1.65	1.1	0.98	16.12	121	0.8	Clear Water
1035	16.55	200	5.67	1.35	0.0	0.98	16.17	112	0.7	↓
1040	16.55	200	5.75	1.27	0.0	0.96	16.18	109	0.6	↓
1045	16.55	200	5.83	1.21	0.0	1.04	16.20	107	0.6	↓
1050	16.55	200	5.90	1.15	0.0	1.09	16.21	104	0.6	↓
1055	16.55	200	5.94	1.12	0.0	1.16	16.21	102	0.6	↓
1100	16.55	200	5.98	1.11	0.0	1.18	16.25	100	0.6	↓

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04755-02

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

Sample ID No.: MRC-MW-110A-032613
Sample Location: MW-110A
Sampled By: WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-26-13								
Time: 1427								
Method: Peristaltic pump	Clear	5.55	2.37	15.06	0.0	0.64	1.2	147

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-26-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 3.14								
One Casing Volume(gal/L):								
Start Purge (hrs): 1335								
End Purge (hrs): 1422								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
Perchlorate	—	1 - 250 ml Poly	✓
1,4 Dioxane	—	2 - 1L Amber	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt Pe

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-110A-032613
DATE: 3-26-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1335	3.14	300	—	—	—	—	—	—	—	Initial, no odor
1337	3.75	300	6.16	2.44	10.6	2.68	15.27	109	1.3	Clean water
1342	4.45	200	5.71	2.53	2.3	1.33	15.07	131	1.3	
1347	4.95	100	5.62	2.56	1.1	0.99	14.62	135	1.3	
1357	5.56	100	5.58	2.55	0.4	0.81	14.51	138	1.3	
1407	6.20	100	5.59	2.47	0.3	0.74	14.69	141	1.3	
1412	6.25	100	5.56	2.42	0.0	0.65	14.82	143	1.2	
1417	6.30	100	5.56	2.39	0.0	0.64	14.57	145	1.2	
1422	6.35	100	5.55	2.37	0.0	0.64	15.06	147	1.2	

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Center
Project No.: 112IC04755-02

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

Sample ID No.: MRC-MW-110B-032613
Sample Location: MW-110B
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 3-26-13								
Time: 1553								
Method: Peristaltic pump	Clear	6.27	3.15	14.83	0.0	1.31	1.5	112

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 3-26-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See low flow Purge Data sheet					
Static Water Level (WL): 2.62								
One Casing Volume(gal/L):								
Start Purge (hrs): 1452								
End Purge (hrs): 1548								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

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

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112FC04795-02
WELL ID.: MRC-MW-110B-032613
DATE: 3-26-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1452	2.62	300	—	—	—	—	—	—	—	Initial, no odor
1453	3.00	300	5.93	0.991	28.4	6.02	15.35	184	0.6	Slightly cloudy
1458	2.80	200	6.21	4.47	7.9	2.70	15.85	99	2.4	Clear Water
1503	2.80	200	6.45	4.58	1.7	2.34	15.27	103	2.4	
1513	2.80	200	6.49	4.20	0.0	1.77	15.02	102	2.2	
1523	2.80	200	6.39	3.50	0.0	1.69	14.91	107	1.8	
1528	2.80	200	6.33	3.19	0.0	1.37	14.85	109	1.7	
1533	2.80	200	6.29	3.17	0.0	1.33	14.83	110	1.6	
1548	2.80	200	6.27	3.15	0.0	1.31	14.83	112	1.5	
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

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

Sample ID No.: MRC-MW-111A-042913
Sample Location: MW-111A
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-29-13 / Time: 1351 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other orp
	Clear	3.99	0.522	14.65	0.0	0.60	0.3	54

PURGE DATA:

Date: 4-29-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge Data sheet					
Total Well Depth (TD):								
Static Water Level (WL): 8.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 1300								
End Purge (hrs): 1346								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02
WELL ID.: MRC-MW-111A-042913
DATE: 4-29-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1300	8.10	300	—	—	—	—	—	—	—	Initial, no odor
1301	8.30	300	1.93	0.532	0.0	2.16	14.38	226	0.3	Clear water
1306	8.40	250	2.41	0.529	0.0	1.20	14.45	165	0.3	
1311	8.55	150	2.93	0.530	0.0	0.91	14.46	124	0.3	
1321	8.80	100	3.56	0.527	0.0	0.78	14.55	81	0.3	
1331	9.00	100	3.89	0.521	0.0	0.64	14.56	60	0.3	
1336	9.22	100	3.96	0.522	0.0	0.59	14.57	55	0.3	
1341	9.25	100	3.97	0.522	0.0	0.59	14.62	54	0.3	
1346	9.27	100	3.99	0.522	0.0	0.60	14.65	54	0.3	
			Well parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): [signature]

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112IC04795-02

Sample ID No.: MRC-MW-111B-042913
Sample Location: MW-111B
Sampled By: MP
C.O.C. No.:

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

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

SAMPLING DATA:

Date: 4-29-13	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1510								
Method: Peristaltic pump	Clear	3.77	0.275	16.17	0.5	0.61	0.1	78

PURGE DATA:

Date: 4-29-13	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low flow purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 15.02								
One Casing Volume(gal/L):								
Start Purge (hrs): 1417								
End Purge (hrs): 1505								
Total Purge Time (min): 48								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Matt R

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Complex
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-111B-042913
DATE: 4-29-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1417	15.02	300	—	—	—	—	—	—	—	Initial, no odor clear water
1420	15.60	300	2.38	0.251	1.4	2.95	15.79	177	0.1	
1425	15.75	200	2.83	0.271	1.3	1.62	15.93	143	0.1	
1430	15.95	200	3.09	0.274	1.4	0.91	15.56	123	0.1	
1440	16.05	200	3.41	0.274	1.1	0.72	15.57	102	0.1	
1450	16.15	200	3.83	0.275	0.8	0.67	15.88	77	0.1	
1455	16.25	200	3.81	0.275	0.7	0.58	16.05	76	0.1	
1500	16.30	200	3.79	0.275	0.6	0.60	16.14	77	0.1	
1505	16.35	200	3.77	0.275	0.5	0.61	16.17	78	0.1	
			Well parameters Stabilize →							
			Sampling Begins →							

SIGNATURE(S): Walt R

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Middle River Complex
Project No.: 112FC04795-02

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

Sample ID No.: MRC-MW-112A-042413
Sample Location: MW-112A
Sampled By: MP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-24-13								
Time: 1349								
Method: Peristaltic pump	Clear	4.32	0.820	16.67	7.6	0.58	0.4	261

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-24-13								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	low	flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 2.47			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1258								
End Purge (hrs): 1344								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total metals	HNO3	1 - 500 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Middle River Center
PROJECT NUMBER: 112IC04795-02

WELL ID.: MRC-MW-112A-042413
DATE: 4-24-13

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1258	2.47	300	—	—	—	—	—	—	—	Initial, no odor
1259	2.91	300	3.89	1.10	15.3	2.30	15.85	380	0.5	Slightly cloudy
1304	3.01	200	3.91	0.981	11.4	1.36	14.98	341	0.5	
1309	3.01	200	4.18	0.882	15.5	0.88	14.80	303	0.4	
1319	3.01	200	4.29	0.836	11.4	0.71	14.75	277	0.4	
1329	3.01	200	4.30	0.829	7.6	0.68	14.77	241	0.4	Clean water
1334	3.01	200	4.32	0.824	7.7	0.58	14.70	264	0.4	
1339	3.01	200	4.31	0.822	7.6	0.57	14.62	263	0.4	
1344	3.01	200	4.32	0.820	7.6	0.58	16.07	261	0.4	

Well Parameters stabilize

Sampling Begins

SIGNATURE(S): Walt R

APPENDIX C— WELL REPAIR REPORT

2013 Monitoring Well Repair Report
Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland

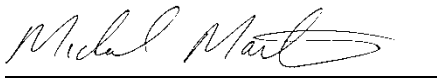
Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

August 6, 2013



Michael Martin, P.G.
Regional Manager



Anthony Apanavage, P.G.
Project Manager

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2.2 REPLACING BOLTS 2-1
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ACRONYMS

bgs	below ground surface
EGIS	environmental geographical information system
FY2013	fiscal year 2013
HASP	health and safety plan
Lockheed Martin	Lockheed Martin Corporation
MRC	Middle River Complex
MSA	Martin State Airport
PVC	polyvinyl chloride
Tetra Tech	Tetra Tech, Inc.
USDOT	United States Department of Transportation
VOCs	volatile organic compounds

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Section 1
Introduction

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech Inc. (Tetra Tech) has prepared the following report that describes the monitoring well repairs conducted in 2013 at the Middle River Complex (MRC), located at 2323 Eastern Boulevard, Middle River, Maryland (see Figure 1-1). The Middle River Complex is approximately 11.5 miles northeast of downtown Baltimore and is comprised of approximately 161 acres, including 12 main buildings, an active industrial area and yard, perimeter parking lots, an athletic field, a concrete-covered vacant lot, a trailer and parts storage lot, and numerous grassy green spaces along its perimeter. The Middle River Complex is bounded by Eastern Boulevard (Route 150) to the north, Dark Head Cove to the south, Cow Pen Creek to the west, and Martin State Airport (MSA) to the east.

Site investigations at the Middle River Complex have identified soil and groundwater contamination associated with historical plant activities. Past sampling programs detected elevated levels of volatile organic compounds (VOCs) and metals in groundwater. The work described herein summarizes the repair and maintenance activities conducted for existing monitoring wells at Middle River Complex, and supports long-term groundwater monitoring at the Middle River Complex. Numerous monitoring wells have been installed to characterize groundwater at Middle River Complex. Over time, the condition of some of these monitoring wells has deteriorated, and maintenance is required. Well inspections conducted during the fiscal year 2013 (FY2013) annual groundwater monitoring program included a groundwater well survey that logged field observations of existing well conditions. A well repair schedule was provided and proposed for completion before the next groundwater sampling event. Specific site monitoring wells were repaired to maintain their integrity and security.

Well repairs included replacing bolts, replacing a protective well cover with a full well pad, and modifying the polyvinyl chloride pipe (PVC) elevation of one well so that the protective well cover could be properly secured. The well requiring pipe alteration was resurveyed following

repair by a professional surveyor. Figure 1-2 shows the locations of the monitoring wells that were repaired in 2013 at the Middle River Complex.

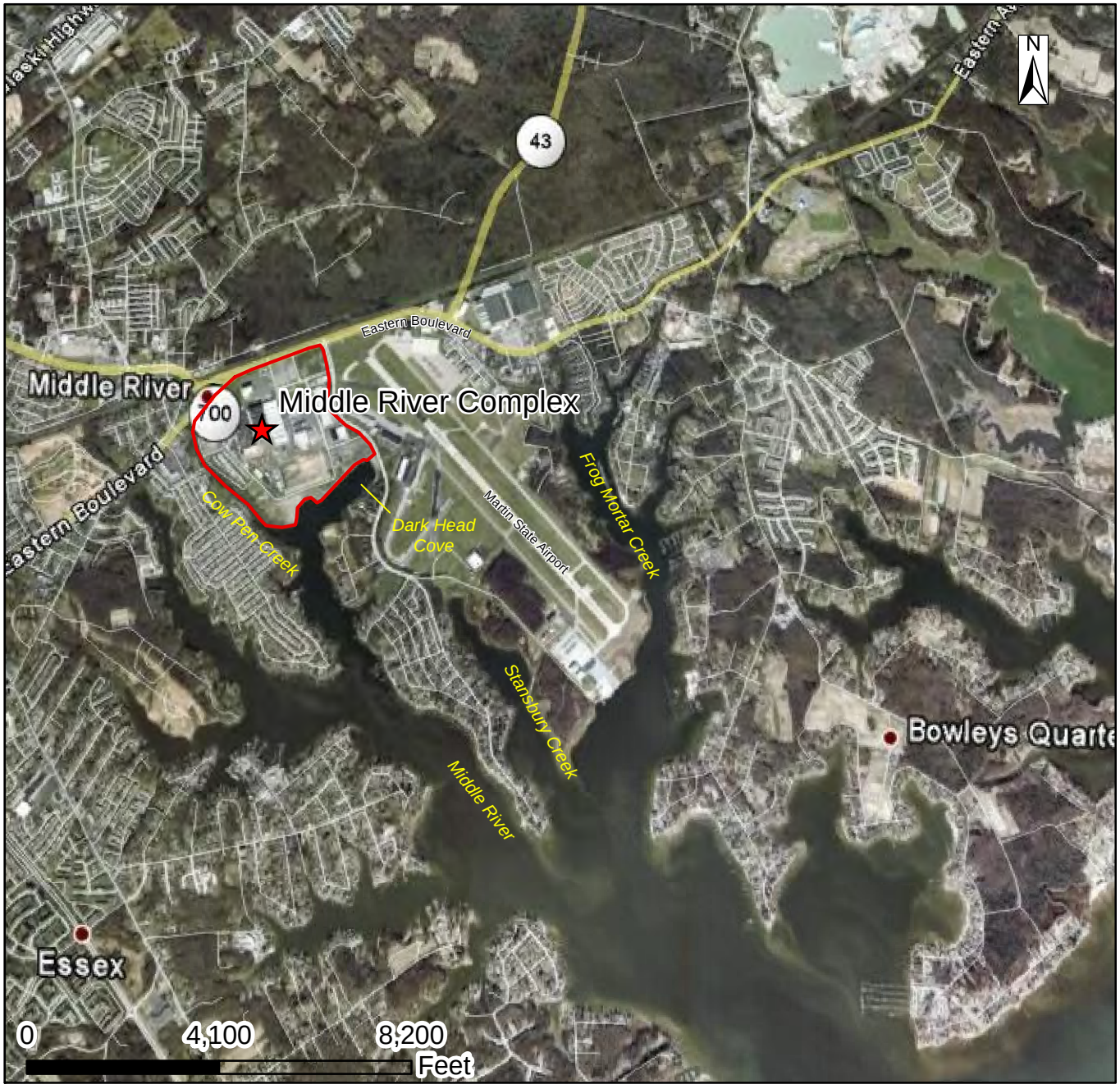
This report is organized as follows:

Section 1—Introduction: This section provides site information and presents an overview of well repairs conducted.

Section 2—Well Repair Approach and Methodology: Presents the technical approach used to repair site monitoring wells, and describes the field methodology employed.

Section 3—Summary: Summarizes the well repair activities.

Map Document: (K:\GProject\middle_river\Maps\MiddleRiver_MRC_Location Map_042811.mxd)
4/28/2011 -- 11:09:59 AM



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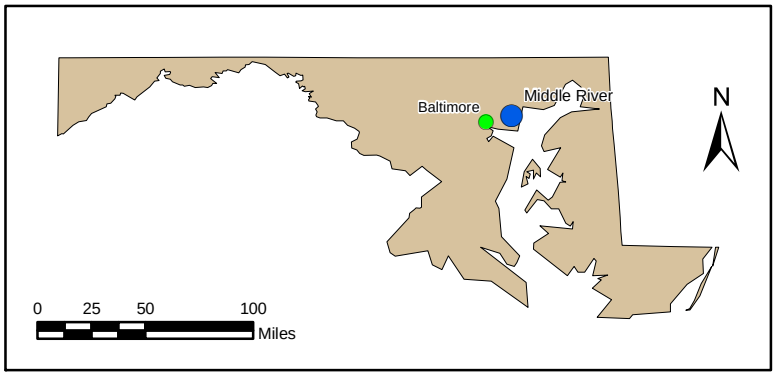

FIGURE 1-1

MIDDLE RIVER COMPLEX
LOCATION MAP

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
7/26/13	MP

TETRA TECH

MARTIN STATE AIRPORT



FIGURE 1-2

GROUNDWATER MONITORING WELL REPAIR LOCATIONS

LEGEND

- PAD REPLACEMENT
- REPLACE BROKEN WELL CAP
- REPLACE BOLTS
- CUT DOWN PVC
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- SURFACE WATER

MRC-MW-101A-B * = This location has multiple repairs.

Lockheed Martin Middle River Complex
Middle River, Maryland

0 140 280 560 Feet

N

DATE MODIFIED: 7/26/13

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\middle_river\Maps\2013 Middle River Groundwater Well Repair Locations.mxd)
6/4/2013 -- 2:35:10 PM

Section 2
Well Repair Approach and Methodology

Before conducting the monitoring well repair activities, appropriate Tetra Tech Inc. (Tetra Tech) personnel became familiar with the site-specific health and safety plan (HASP) and the respective safe work permit and emergency response plan included in the HASP, as well as the waste handling, transportation, and disposal plan. Tetra Tech conducted a daily mandatory health and safety tailgate meeting before all field activities. Safety requirements were followed as detailed in the site-specific Tetra Tech HASP, which was included as Appendix A of the work plan.

2.1 UTILITY CLEARANCE AND PERMITTING

The type and location of the monitoring well repair work required no access agreements or special permits. In addition, all well repairs were conducted within the existing limits of the current well pads; therefore, no further utility clearance was required.

2.2 REPLACING BOLTS

The bolts on thirty-one wells (Table 2-1; Figure 1-2) needed replacement, so new ($^{9}/_{16}$-inch) stainless-steel bolts were installed in the existing flush-mounted well covers of these wells.

2.3 WELL PAD AND EMBEDDED CAP REPLACEMENT

The concrete pads and flush-mounted covers surrounding six (6) existing monitoring wells (MRC-MW08A, MRC-MW12A, MRC-MW26A, MRC-MW27A, MRC-MW27C, and MRC-MW30A) had cracked/deteriorated over time and needed to be replaced (Table 2-1). Attempts to salvage two wells (MRC-MW12A and MRC-MW30A) were successful; field personnel were able to re-tap the dog ears of these wells and longer bolts were used to restore the functionality of the protective casings at these locations. The existing 2-foot by 2-foot concrete pads of the other wells were broken up with a jackhammer, and concrete and gravel rubble was

cleared to approximately 6-inches below ground surface (bgs) using a shovel. All concrete debris was disposed of according to the waste handling, transportation, and disposal plan. Broken pieces of concrete were placed in 55-gallon steel drums that were subsequently removed from the site by a Lockheed Martin Corporation (Lockheed Martin)-approved waste vendor. Steel flush–mounted well covers were disposed of as standard metal debris in an approved, on-site, recyclable metal roll-off dumpster.

New flush-mount covers were installed around the polyvinyl chloride (PVC) well prior to pouring the concrete. Each flush-mounted well cover was an appropriately–sized (approximately 8 to 10-inch diameter) watertight gasket with a bolt-secured well lid and a skirt constructed of stainless steel. High strength concrete (Pro Finish Quikrete 5000®) consisting of Portland cement and water was mixed in a wheelbarrow. Steel reinforcing bars were placed into the form in 12-inch lengths to strengthen the new concrete pads. The fresh concrete pads were installed flush with the ground surface to prevent damage from vehicles, equipment, and snowplows.

Three nested off-site monitoring wells located west of the Middle River Complex (MRC) and across Cow Pen Creek also needed repair. These wells are enclosed in 4-inch diameter PVC pipe equipped with a locking well cap (i.e., a 4-inch "Grip-N-Lock") to prevent tampering. The clamp on this cap was broken so a new security cap was installed.

2.4 PVC ALTERATION

The PVC pipes on nested monitoring wells MRC-MW101A-B were cut down so that the metal lid could fit securely on the flush-mounted well cover (Table 2-1). The pipes were cut with a specialized PVC saw that left the edges level and smooth. These wells were resurveyed by a professional surveyor following repairs because their elevation changed.

2.5 DOCUMENTATION

A master site logbook was maintained as an overall record of field activities. No photos of the wells at Middle River Complex were taken because photographs are restricted in the secured area of the site.

2.6 WASTE MANAGEMENT

All waste and debris were disposed of according to the waste management plan. Concrete waste was placed in 55-gallon steel drums, and metal casings were placed in a designated (Lockheed Martin-approved) dumpster for recycling in support of the Lockheed Martin "Go Green" program. Drummed concrete was characterized and profiled as nonhazardous construction debris, and removed from the site by a Lockheed Martin-approved nonhazardous-waste vendor. Waste management forms and the bills of lading are presented in Appendix A.

2.7 SITE RESTORATION

Site restoration was completed as necessary and as required by Lockheed Martin. Each location was returned to its original condition once the repairs described in this report were completed. Well covers and well pads were installed flush with the ground surface to prevent damage from vehicle traffic and snow plowing, and investigative-derived waste was disposed of as described in the previous section. No damage was done to the surrounding asphalt or grass areas of the site.

2.8 RESURVEY OF WELL CASINGS

The four monitoring wells requiring new pads (MRC-MW08A, MRC-MW26A, MRC-MW27A, and MRC-MW27C and the nested monitoring wells MRC-MW101A-B that were cut down were professionally surveyed by a qualified, Maryland-licensed land surveying firm. These wells were resurveyed because of elevation changes resulting from the well repairs described above. Horizontal and vertical coordinates were provided for each repaired well: vertical elevations were accurate to the nearest 0.01 foot in the North American Vertical Datum 1988, and horizontal well locations were accurate to the nearest 0.1 foot in the North American Datum 1983. The well re-survey data is in Appendix B.

Table 2-1

Monitoring Well Repair Summary Table 2013
Lockheed Martin, Middle River Complex
Middle River, Maryland

Well Repair	Well ID
Replaced Missing/Damaged Bolts	MRC-MW01A
	MRC-MW02A
	MRC-MW07A
	MRC-MW12A
	MRC-MW12B
	MRC-MW13A
	MRC-MW14C
	MRC-MW17A
	MRC-MW20A
	MRC-MW22B
	MRC-MW24A
	MRC-MW27B
	MRC-MW30A
	MRC-MW31A
	MRC-MW34B
	MRC-MW34C
	MRC-MW38A
	MRC-MW43A
	MRC-MW48A
	MRC-MW54A
	MRC-MW57A
	MRC-MW60A
	MRC-MW62C
	MRC-MW67A
	MRC-MW71B
	MRC-MW73B
	MRC-MW76A
	MRC-MW77A
	MRC-MW88A
	MRC-MW98B
	MRC-MW101B
Replace Well Pad (damaged dog ears)	MRC-MW08A
	MRC-MW26A
	MRC-MW27A
	MRC-MW27C
Replace Broken Well Cap	MRC-OF02A-C*
Alter PVC (cut PVC pipe to fit metal lid)	MRC-MW101A-B

*All wells are located in Lockheed Martin Corporation's Middle River Complex except for wells MRC-OF02A-C, which are located west of Middle River Complex across Cow Pen Creek.
PVC = polyvinyl chloride

Section 3
Summary

This report summarizes and describes groundwater monitoring well repairs conducted at the Middle River Complex (MRC) in 2013. Field procedures, a table presenting the specific repairs completed, documentation of waste handling and disposal, and new survey data are presented herein. New and updated monitoring well elevation data were added to the Middle River Complex environmental geographical information system (EGIS), as appropriate. Tetra Tech Inc. (Tetra Tech) personnel will continue to regularly inspect the integrity and condition of the Middle River Complex monitoring wells during future groundwater monitoring and sampling events. Additional attention will be paid to the condition of wells in high traffic areas that may pose health and safety or well integrity concerns. Tetra Tech, Inc. has also asked the Middle River Complex tenants to notify Tetra Tech, Inc. if they notice a well that requires repair or replacement. Tetra Tech, Inc. will notify Lockheed Martin Corporation (Lockheed Martin) and Remediation Technical Operations, and will obtain approval and funding before starting any future well repairs.

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APPENDIX A—WASTE MANAGEMENT FORMS

Waste Identifcation and Classification Form

Remediation Project	Middle River Complex	**State Generated**	MD
Description of Waste			
Generic Name	Concrete and Asphalt	**Solid, Liquid, Gas**	Solid
		Additional Info.	
Date of Waste Generation	7/1/2013	**Ongoing (Y/N)?**	N

Description of Process Generating Waste

Concrete and asphalt from well repair work and well drilling. 3 drums

Listed Waste ? (Y/N)	N	**F,K, P or U Codes**	

Justification for Waste Classification (attached supporting documentation)

Profiled as non hazardous construction debris by Clean Harbors.

Form completed by	Tony Apanavage
Date	8/16/2013

D47956357 6130

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MDR000524413	1	800-483-3718	006809714 FLE

GENERATOR

5. Generator's Name and Mailing Address: MICHAEL MUSMONO, MIDDLE RIVER COMPLEX, 195 CHESAPEAKE PARK PLAZA RD, MIDDLE RIVER, MD 21220

Generator's Site Address (if different than mailing address): 195 CHESAPEAKE PARK PLAZA ROAD, BALTIMORE, MD 21220

Generator's Phone:

6. Transporter 1 Company Name: CLEAN HARBORS ENVIRONMENTAL SERVICES INC — U.S. EPA ID Number: MAD039322750

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: SPRING GROVE RESOURCE RECOVERY INC., 4879 SPRING GROVE AVENUE, CINCINNATI, OH 45232 — U.S. EPA ID Number: OHD000816629

Facility's Phone: 513-681-5738

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. NON DOT REGULATED MATERIAL (SOIL)	6	DM	420	P	NONE		
	2. NON HAZARDOUS NON DOT REGULATED (CONCRETE CORES)	4	DM	280	P	NONE		
	3.							
	4.							

14. Special Handling Instructions and Additional Information

1. CH673563
2. CNS82921A

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Michael Musmono — Signature — Month 08 Day 13 Year 13

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month 08 Day 13 Year 13

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month Day Year

APPENDIX B—SURVEY DATA

Lockheed Martin MW Data Fri Jul 26 08:50:53 2013

PointNo.	Northing(Y)	Easting(X)	Elev(Z)	Description
1	605717.91	1473441.38	23.30	MRC-MW26A PVC 22.80
2	605771.68	1473545.82	21.72	MRC-MW27A PVC 21.32
3	605781.76	1473579.89	21.11	MRC-MW27C PVC 20.78
4	605489.15	1473200.37	27.30	MRC-MW101A PVC(A)27.03 PVC(B)26.99
5	605867.84	1471400.13	10.02	MRC-MW08A PVC 9.75
6	606558.69	1475448.05	18.29	MSAMT-MW01S PVC 17.99
7	604144.68	1479708.46	8.65	MSA-MW02 PVC 8.39
190	607285.08	1474311.92	20.71	CONTROL/ MARTAIR AZ MK

NAD83(2007) NAVD88 SPC MD (FT)

*All wells are Flush Mount,Top of Well Casing & Ground same Elevation
*Z=Top Of Outter Casing

APPENDIX D— DATA VALIDATION REPORTS (ON CD)

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**T. APANAVAGE**	**DATE:**	**April 12, 2013**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOC AND SELECT METALS**
LOCKHEED-MIDDLE RIVER COMPLEX
SDG 240-22082-1

SAMPLES: 9/Aqueous/

MRC-MW30A-031513	MRC-MW31A-031513
MRC-MW32A-031513	MRC-MW33A-031513
MRC-MW34A-031513	MRC-MW86A-031513
MRC-MW86B-031513	MRC-MW87B-031513
TB-031513	

Overview

The sample set for Lockheed MRC, SDG 240-22082-1, consists of eight (8) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for volatile organic compounds (VOCs) and select metals (except TB-031513). The samples were collected by Tetra Tech on March 15th, 2013 and analyzed by TestAmerica. VOC analyses were conducted using method 8260B. Metals analyses were conducted using methods 6020. Mercury analyses were conducted using method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, GC/MS tuning, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, surrogate standard recoveries, laboratory control sample recoveries, matrix spike recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- The initial calibration analyzed on 2/7/13 on instrument A3UX16 had a relative response factor (RRF) <0.05 for tertiary butyl alcohol. All samples were affected. The non-detected results were qualified as rejected (UR).

- The continuing calibration analyzed on 3/25/13 at 17:48 on instrument A3UX16 had a relative response factor (RRF) <0.05 for tertiary butyl alcohol. All samples were affected. The non-detected results were qualified as rejected (UR).

Minor Problems-

- The following contaminants were detected in method and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Hexachlorobutadiene [1]	0.31 ug/L	1.5 ug/L
Acetone [2]	11 ug/L	110.0 ug/L
Copper [3]	0.94 ug/L	4.7 ug/L

[1] Maximum concentration found in a preparation blank affecting all samples except the trip blank.
[2] Maximum concentration found in the associated trip blank affecting all samples.
[3] Maximum concentration found in a preparation blank affecting all samples.

An action level of 5X and 10X (methylene chloride only) the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The continuing calibration analyzed on 3/25/13 at 17:48 on instrument A3UX16 had a percent difference > 20% but < 50% for chloromethane, chloroethane, 1,1,2-trichlorotrifluoroethane, 1,2,4-trichlorobenzne, naphthanlene, and 1,2,3-trichlorobenzene and percent recoveries > 50% for dichlorodifluoromethane, trichlorofluoromethane, and hexachlorobutadiene. Non-detected dichlorodifluoromethane, trichlorofluoromethane, and hexachlorobutadiene results were qualified as estimated (UJ). No validation action was warranted for chloromethane, chloroethane, 1,1,2-trichlorotrifluoroethane, 1,2,4-trichlorobenzne, naphthanlene, and 1,2,3-trichlorobenzene as sample results were non-detected.

Notes

Positive results greater than MDL but less than the RL were qualified as estimated (J).

Sample MRC-MW87B-031513 was analyzed at a 2.5X dilution for VOC.

Form 1s had non-detected results reported to the reporting limit (RL). The validator changed the non-detected results to be reported at the method detection limit (MDL).

The laboratory spike had a percent recovery greater than the upper control limit for dichlorodifluoromethane, trichlorofluoromethane, and 1,1,2-trichlorotrifluoroethane. All samples were affected. No validation action was warranted as sample results were non-detected.

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted on the qualification of sample results. Initial and continuing calibration non-compliances resulted in the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993) and U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW32A-031513			MRC-MW33A-031513			MRC-MW34A-031513			MRC-MW86A-031513		
SDG: 240-22082-1	LAB_ID	240-22082-3			240-22082-4			240-22082-6			240-22082-7		
FRACTION: OV	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.25	J	P	0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW86B-031513			MRC-MW87B-031513			TB-031513		
SDG: 240-22082-1	LAB_ID	240-22082-8			240-22082-9			240-22082-5		
FRACTION: OV	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.58	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.55	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.45	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.7	U		0.28	U	
1,1-DICHLOROETHANE		0.19	J	P	0.38	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.48	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.33	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.43	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		1.1	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.015	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.38	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.3	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		1.7	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.6	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.33	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.55	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.45	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.35	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.4	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.33	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.33	U		0.13	U	
2-BUTANONE		0.57	U		1.4	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		2.5	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.28	U		0.11	U	
2-HEXANONE		0.41	U		1	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.45	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.3	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.8	U		0.32	U	
ACETONE		1.1	U		13	B	A	11		
BENZENE		0.13	U		0.33	U		0.13	U	
BROMOBENZENE		0.13	U		0.33	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.73	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.38	U		0.15	U	
BROMOFORM		0.64	U		1.6	U		0.64	U	
BROMOMETHANE		0.41	U		1	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.33	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW32A-031513			MRC-MW33A-031513			MRC-MW34A-031513			MRC-MW86A-031513		
SDG: 240-22082-1	LAB_ID	240-22082-3			240-22082-4			240-22082-6			240-22082-7		
FRACTION: OV	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		2.4			0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	0.31	UJ	C	0.31	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	UJ	C	0.3	UJ	C	0.3	UJ	C	0.3	UJ	C
ISOPROPYL ALCOHOL													
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		3.8			0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.62	J	P	2.8			20			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	UJ	C	0.21	UJ	C	0.21	UJ	C
VINYL ACETATE		0.19	U		0.19	U		0.19	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW86B-031513			MRC-MW87B-031513			TB-031513		
SDG: 240-22082-1	LAB_ID	240-22082-8			240-22082-9			240-22082-5		
FRACTION: OV	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.33	U		0.13	U	
CHLOROBENZENE		0.15	U		0.38	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.45	U		0.18	U	
CHLOROETHANE		0.29	U		0.73	U		0.29	U	
CHLOROFORM		0.16	U		0.4	U		0.16	U	
CHLOROMETHANE		0.3	U		0.75	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		2.2	J	P	0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.35	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.7	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	0.78	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		1.5	U		3.8	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.28	U		0.11	U	
ETHYLBENZENE		0.17	U		0.43	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	UJ	C	0.75	UJ	C	0.3	UJ	C
ISOPROPYL ALCOHOL								2	NJ	Z1
ISOPROPYLBENZENE		0.13	U		0.33	U		0.13	U	
M+P-XYLENES		0.24	U		0.6	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.43	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.83	U		0.33	U	
NAPHTHALENE		0.24	U		0.6	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.3	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.35	U		0.14	U	
O-XYLENE		0.14	U		0.35	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.33	U		0.13	U	
STYRENE		0.11	U		0.28	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.17	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.33	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	9.8	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.73	U		0.29	U	
TOLUENE		0.13	U		0.33	U		0.13	U	
TOTAL XYLENES		0.28	U		0.7	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.48	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.48	U		0.19	U	
TRICHLOROETHENE		0.17	U		52			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.53	UJ	C	0.21	UJ	C
VINYL ACETATE		0.19	U		0.48	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW32A-031513			MRC-MW33A-031513			MRC-MW34A-031513			MRC-MW86A-031513		
SDG: 240-22082-1	LAB_ID	240-22082-3			240-22082-4			240-22082-6			240-22082-7		
FRACTION: OV	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW86B-031513			MRC-MW87B-031513			TB-031513		
SDG: 240-22082-1	LAB_ID	240-22082-8			240-22082-9			240-22082-5		
FRACTION: OV	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL CHLORIDE		0.22	U		0.55	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW30A-031513			MRC-MW31A-031513			MRC-MW33A-031513			MRC-MW86A-031513		
SDG: 240-22082-1	LAB_ID	240-22082-1			240-22082-2			240-22082-4			240-22082-7		
FRACTION: M	SAMP_DATE	3/15/2013			3/15/2013			3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		2.3			0.3	U		0.3	U		0.3	U	
ARSENIC		0.9	U		0.9	U		0.9	U		0.98	J	P
BARIUM		46			93			43			120		
BERYLLIUM		0.22	J	P	5.1			8.5			0.17	J	P
CADMIUM		0.13	J	P	0.1	U		0.47	J	P	0.23	J	P
CHROMIUM		2.5			0.9	U		1.3	J	P	0.9	U	
COBALT		18			45			74			140		
COPPER		3.7	B	A	22			9.1			1.1	B	A
LEAD		0.44	J	P	0.36	J	P	0.37	J	P	0.2	U	
MERCURY		0.1	U		0.1	U		0.1	U		0.1	U	
MOLYBDENUM		1.4	J	P	0.2	U		0.29	J	P	1.4	J	P
NICKEL		8.8			83			57			100		
SELENIUM		2	J	P	0.5	U		0.5	U		0.5	U	
SILVER		0.14	J	P	0.1	U		0.1	U		0.1	U	
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		13	J	P	0.8	U		0.8	J	P	0.8	U	
ZINC		13	J	P	74			160			25		

PROJ_NO: 04795	NSAMPLE	MRC-MW86B-031513			MRC-MW87B-031513		
SDG: 240-22082-1	LAB_ID	240-22082-8			240-22082-9		
FRACTION: M	SAMP_DATE	3/15/2013			3/15/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		1.9	J	P
ARSENIC		0.9	U		1.4	J	P
BARIUM		160			150		
BERYLLIUM		0.57	J	P	0.11	J	P
CADMIUM		0.13	J	P	0.1	U	
CHROMIUM		0.9	U		11		
COBALT		230			11		
COPPER		0.79	B	A	6.7		
LEAD		0.29	J	P	0.4	J	P
MERCURY		0.1	U		0.1	U	
MOLYBDENUM		0.3	J	P	10		
NICKEL		220			21		
SELENIUM		0.5	U		0.76	J	P
SILVER		0.1	U		0.1	U	
THALLIUM		0.2	U		0.2	U	
VANADIUM		0.85	J	P	7.8	J	P
ZINC		230			6.9	J	P

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW32A-031513 | Lab Sample ID: 240-22082-3

Matrix: Water | Lab File ID: UXM7000.D

Analysis Method: 8260B | Date Collected: 03/15/2013 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 19:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW32A-031513 | Lab Sample ID: 240-22082-3

Matrix: Water | Lab File ID: UXM7000.D

Analysis Method: 8260B | Date Collected: 03/15/2013 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 19:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.62	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW32A-031513 Lab Sample ID: 240-22082-3

Matrix: Water Lab File ID: UXM7000.D

Analysis Method: 8260B Date Collected: 03/15/2013 12:35

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 19:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW32A-031513 Lab Sample ID: 240-22082-3

Matrix: Water Lab File ID: UXM7000.D

Analysis Method: 8260B Date Collected: 03/15/2013 12:35

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 19:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW33A-031513 | Lab Sample ID: 240-22082-4

Matrix: Water | Lab File ID: UXM7001.D

Analysis Method: 8260B | Date Collected: 03/15/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 20:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	2.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	0.25	J	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW33A-031513 Lab Sample ID: 240-22082-4

Matrix: Water Lab File ID: UXM7001.D

Analysis Method: 8260B Date Collected: 03/15/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	3.8		1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	2.8		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW33A-031513 | Lab Sample ID: 240-22082-4

Matrix: Water | Lab File ID: UXM7001.D

Analysis Method: 8260B | Date Collected: 03/15/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 20:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW33A-031513 Lab Sample ID: 240-22082-4

Matrix: Water Lab File ID: UXM7001.D

Analysis Method: 8260B Date Collected: 03/15/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW34A-031513 Lab Sample ID: 240-22082-6

Matrix: Water Lab File ID: UXM7003.D

Analysis Method: 8260B Date Collected: 03/15/2013 14:35

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW34A-031513 | Lab Sample ID: 240-22082-6

Matrix: Water | Lab File ID: UXM7003.D

Analysis Method: 8260B | Date Collected: 03/15/2013 14:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 20:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	20		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW34A-031513 | Lab Sample ID: 240-22082-6

Matrix: Water | Lab File ID: UXM7003.D

Analysis Method: 8260B | Date Collected: 03/15/2013 14:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 20:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW34A-031513 Lab Sample ID: 240-22082-6

Matrix: Water Lab File ID: UXM7003.D

Analysis Method: 8260B Date Collected: 03/15/2013 14:35

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86A-031513 Lab Sample ID: 240-22082-7

Matrix: Water Lab File ID: UXM7004.D

Analysis Method: 8260B Date Collected: 03/15/2013 10:38

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86A-031513 | Lab Sample ID: 240-22082-7

Matrix: Water | Lab File ID: UXM7004.D

Analysis Method: 8260B | Date Collected: 03/15/2013 10:38

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 21:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86A-031513 Lab Sample ID: 240-22082-7

Matrix: Water Lab File ID: UXM7004.D

Analysis Method: 8260B Date Collected: 03/15/2013 10:38

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86A-031513 Lab Sample ID: 240-22082-7

Matrix: Water Lab File ID: UXM7004.D

Analysis Method: 8260B Date Collected: 03/15/2013 10:38

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86B-031513 Lab Sample ID: 240-22082-8

Matrix: Water Lab File ID: UXM7005.D

Analysis Method: 8260B Date Collected: 03/15/2013 12:27

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	0.19	J	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86B-031513 Lab Sample ID: 240-22082-8

Matrix: Water Lab File ID: UXM7005.D

Analysis Method: 8260B Date Collected: 03/15/2013 12:27

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86B-031513 Lab Sample ID: 240-22082-8

Matrix: Water Lab File ID: UXM7005.D

Analysis Method: 8260B Date Collected: 03/15/2013 12:27

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW86B-031513 Lab Sample ID: 240-22082-8

Matrix: Water Lab File ID: UXM7005.D

Analysis Method: 8260B Date Collected: 03/15/2013 12:27

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 21:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW87B-031513 Lab Sample ID: 240-22082-9

Matrix: Water Lab File ID: UXM7006.D

Analysis Method: 8260B Date Collected: 03/15/2013 15:50

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 22:00

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	13	B	13	2.8
71-43-2	Benzene	2.5	U	2.5	0.33
108-86-1	Bromobenzene	2.5	U	2.5	0.33
74-97-5	Bromochloromethane	2.5	U	2.5	0.73
75-27-4	Bromodichloromethane	2.5	U	2.5	0.38
75-25-2	Bromoform	2.5	U	2.5	1.6
74-83-9	Bromomethane	2.5	U	2.5	1.0
78-93-3	2-Butanone	13	U	13	1.4
75-15-0	Carbon disulfide	2.5	U	2.5	0.33
56-23-5	Carbon tetrachloride	2.5	U	2.5	0.33
108-90-7	Chlorobenzene	2.5	U	2.5	0.38
75-00-3	Chloroethane	2.5	U	2.5	0.73
110-75-8	2-Chloroethyl vinyl ether	25	U	25	2.5
67-66-3	Chloroform	2.5	U	2.5	0.40
74-87-3	Chloromethane	2.5	U	2.5	0.75
95-49-8	2-Chlorotoluene	2.5	U	2.5	0.28
106-43-4	4-Chlorotoluene	2.5	U	2.5	0.45
156-59-2	cis-1,2-Dichloroethene	2.2	J	2.5	0.43
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	0.35
124-48-1	Dibromochloromethane	2.5	U	2.5	0.45
96-12-8	1,2-Dibromo-3-Chloropropane	13	U	13	1.7
106-93-4	1,2-Dibromoethane	2.5	U	2.5	0.60
74-95-3	Dibromomethane	2.5	U	2.5	0.70
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	0.33
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	0.35
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	0.33
75-71-8	Dichlorodifluoromethane	2.5	U *	2.5	0.78
75-34-3	1,1-Dichloroethane	2.5	U	2.5	0.38
107-06-2	1,2-Dichloroethane	2.5	U	2.5	0.55
75-35-4	1,1-Dichloroethene	2.5	U	2.5	0.48
78-87-5	1,2-Dichloropropane	2.5	U	2.5	0.45
142-28-9	1,3-Dichloropropane	2.5	U	2.5	0.40
594-20-7	2,2-Dichloropropane	2.5	U	2.5	0.33
563-58-6	1,1-Dichloropropene	2.5	U	2.5	0.33
108-20-3	Diisopropyl ether	13	U	13	3.8
100-41-4	Ethylbenzene	2.5	U	2.5	0.43

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW87B-031513 | Lab Sample ID: 240-22082-9

Matrix: Water | Lab File ID: UXM7006.D

Analysis Method: 8260B | Date Collected: 03/15/2013 15:50

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 22:00

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	13	U	13	0.28
87-68-3	Hexachlorobutadiene	2.5	U	2.5	0.75
591-78-6	2-Hexanone	13	U	13	1.0
98-82-8	Isopropylbenzene	2.5	U	2.5	0.33
75-09-2	Methylene Chloride	2.5	U	2.5	0.83
108-10-1	4-Methyl-2-pentanone	13	U	13	0.80
1634-04-4	Methyl tert-butyl ether	2.5	U	2.5	0.43
179601-23-1	m-Xylene & p-Xylene	5.0	U	5.0	0.60
91-20-3	Naphthalene	2.5	U	2.5	0.60
104-51-8	n-Butylbenzene	2.5	U	2.5	0.30
103-65-1	n-Propylbenzene	2.5	U	2.5	0.35
95-47-6	o-Xylene	2.5	U	2.5	0.35
99-87-6	p-Isopropyltoluene	2.5	U	2.5	0.30
135-98-8	sec-Butylbenzene	2.5	U	2.5	0.33
100-42-5	Styrene	2.5	U	2.5	0.28
994-05-8	Tert-amyl-methyl ether (TAME)	13	U	13	0.17
75-65-0	tert-Butyl alcohol	50	U	50	9.8
98-06-6	tert-Butylbenzene	2.5	U	2.5	0.33
630-20-6	1,1,1,2-Tetrachloroethane	2.5	U	2.5	0.58
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.45
127-18-4	Tetrachloroethene	2.5	U	2.5	0.73
108-88-3	Toluene	2.5	U	2.5	0.33
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	0.48
10061-02-6	trans-1,3-Dichloropropene	2.5	U	2.5	0.48
87-61-6	1,2,3-Trichlorobenzene	2.5	U	2.5	0.43
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	0.38
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	0.55
79-01-6	Trichloroethene	52		2.5	0.43
75-69-4	Trichlorofluoromethane	2.5	U *	2.5	0.53
96-18-4	1,2,3-Trichloropropane	2.5	U	2.5	1.1
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	2.5	U *	2.5	0.70
526-73-8	1,2,3-Trimethylbenzene	13	U	13	0.015
95-63-6	1,2,4-Trimethylbenzene	2.5	U	2.5	0.30
108-05-4	Vinyl acetate	5.0	U	5.0	0.48
75-01-4	Vinyl chloride	2.5	U	2.5	0.55

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW87B-031513 Lab Sample ID: 240-22082-9

Matrix: Water Lab File ID: UXM7006.D

Analysis Method: 8260B Date Collected: 03/15/2013 15:50

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 22:00

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	5.0	U	5.0	0.70

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: MRC-MW87B-031513 Lab Sample ID: 240-22082-9

Matrix: Water Lab File ID: UXM7006.D

Analysis Method: 8260B Date Collected: 03/15/2013 15:50

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 22:00

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: TB-031513 | Lab Sample ID: 240-22082-5

Matrix: Water | Lab File ID: UXM7002.D

Analysis Method: 8260B | Date Collected: 03/15/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 20:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	11	B	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: TB-031513 Lab Sample ID: 240-22082-5

Matrix: Water Lab File ID: UXM7002.D

Analysis Method: 8260B Date Collected: 03/15/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: TB-031513 Lab Sample ID: 240-22082-5

Matrix: Water Lab File ID: UXM7002.D

Analysis Method: 8260B Date Collected: 03/15/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		63-129
2037-26-5	Toluene-d8 (Surr)	82		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: TB-031513 Lab Sample ID: 240-22082-5

Matrix: Water Lab File ID: UXM7002.D

Analysis Method: 8260B Date Collected: 03/15/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 20:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
67-63-0	Isopropyl Alcohol	3.31	2.0	T J N

FORM I-TIC 8260B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW30A-031513 Lab Sample ID: 240-22082-1

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 10:25

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW31A-031513 Lab Sample ID: 240-22082-2

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 11:20

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW33A-031513 Lab Sample ID: 240-22082-4

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 13:40

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW86A-031513 Lab Sample ID: 240-22082-7

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 10:38

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW86B-031513 Lab Sample ID: 240-22082-8

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 12:27

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW87B-031513 Lab Sample ID: 240-22082-9

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 15:50

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW30A-031513 Lab Sample ID: 240-22082-1

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 10:25

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.3	2.0	0.30	ug/L			1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.22	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.13	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	46	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.5	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	3.7	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	8.8	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.44	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	2.0	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	18	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.14	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	13	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	1.4	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	13	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW31A-031513 Lab Sample ID: 240-22082-2

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 11:20

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	5.1	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	93	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	22	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	83	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.36	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	45	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	74	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW33A-031513 Lab Sample ID: 240-22082-4

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 13:40

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	8.5	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.47	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	43	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.3	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	9.1	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	57	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.37	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	74	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	160	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.29	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	0.80	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW86A-031513 Lab Sample ID: 240-22082-7

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 10:38

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	0.98	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	0.17	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.23	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	120	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.1	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	100	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	140	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	25	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.4	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW86B-031513 Lab Sample ID: 240-22082-8

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 12:27

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.57	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.13	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	160	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.79	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	220	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.29	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	230	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	230	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.30	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	0.85	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW87B-031513 Lab Sample ID: 240-22082-9

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG ID.:

Matrix: Water Date Sampled: 03/15/2013 15:50

Reporting Basis: WET Date Received: 03/16/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	1.9	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	1.4	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	0.11	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	150	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	11	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	6.7	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	21	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.40	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.76	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	11	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	6.9	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L			1	6020
7440-62-2	Vanadium	7.8	20	0.80	ug/L	J		1	6020

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 009425
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (301) 528-3002 (703)347-8357	Telephone:	1 of 1 COCs
City/State/Zip: Germantown, MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (In BUS days)	Analyses	
Phone: (301) 528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04795-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C / Grab G	VOCs	Total Metals	Sample Specific Notes / Special Instructions:
MRC-MW30A-031513	3/15/13	1025		X					1						N	G	X		
MRC-MW31A-031513	3/15/13	1120		X					1						N	G	X		
MRC-MW32A-031513	3/15/13	1235		X						3					N	G	X		
MRC-MW33A-031513	3/15/13	1340		X					1	3					N	G	X	X	
TB-031513				X						2							X		
MRC-MW34A-031513	3/15/13	1435		X						3					N	G	X		
MRC-MW-86A-031513	↓	1038		X					1	3							X	X	
MRC-MW-86B-031513		1227		X					1	3							X	X	
MRC-MW-87B-031513	↓	1550		X					1	3					↓	↓	X	X	

240-22082 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt	TT Inc	3-15-13 1600	Paul Hurd	TestAmerica	3/15/13 1600
Relinquished by:	Company: TestAmerica	Date/Time: 3/15/13 1720	Received by:	Company: TA	Date/Time: 3-16-13 945
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL 0018- 1 (04/10)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling

Report Number: 240-22082-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Total Recoverable Metals and the 7470A Total Mercury analyses were performed at the TestAmerica Irvine laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 03/16/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW32A-031513 (240-22082-3), MRC-MW33A-031513 (240-22082-4), TB-031513 (240-22082-5), MRC-MW34A-031513 (240-22082-6), MRC-MW86A-031513 (240-22082-7), MRC-MW86B-031513 (240-22082-8) and MRC-MW87B-031513 (240-22082-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/25/2013.

Acetone and Hexachlorobutadiene were detected in method blank MB 240-79378/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW87B-031513 (240-22082-9)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 79378 exceeded control limits for the following analyte(s): Dichlorodifluoromethane, Trichlorofluoromethane and 1,1,2-Trichloro-1,2,2-trifluoroethane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

There was an MS/MSD analyzed in batch 79378 but could not be reported because the associated sample needed reanalyzed in a different batch.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW30A-031513 (240-22082-1), MRC-MW31A-031513 (240-22082-2), MRC-MW33A-031513 (240-22082-4), MRC-MW86A-031513 (240-22082-7), MRC-MW86B-031513 (240-22082-8) and MRC-MW87B-031513 (240-22082-9) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared and analyzed on 04/01/2013.

Copper was detected in method blank MB 440-95355/1-A at a level that was above the method detection limit but below the reporting

limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW30A-031513 (240-22082-1), MRC-MW31A-031513 (240-22082-2), MRC-MW33A-031513 (240-22082-4), MRC-MW86A-031513 (240-22082-7), MRC-MW86B-031513 (240-22082-8) and MRC-MW87B-031513 (240-22082-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 03/29/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TestAmerica Canton
Target Compound Quantitation Report

MRC-MW87B-0315B

Data File: \\Ncchrom\ChromData\A3UX16\20130325-18237.b\UXM7006.D
Lims ID: 240-22082-B-9 Client ID: MRC-MW87B-031513
Inject. Date: 25-Mar-2013 22:00:30 Dil. Factor: 2.5000
Sample Type: Client
Sample ID: 240-0018237-013
Misc. Info.: M30325A,8260LLUX16,,1644
Operator: 1644 Instrument ID: A3UX16
Purge Vol: 5.000 mL ALS Bottle#: 13
Lims Batch ID: 79378 Lims Sample ID: 13
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A3UX16\20130325-18237.b\8260_16.m
Last Update: 26-Mar-2013 12:04:18 Calib Date: 07-Feb-2013 15:20:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX16\20130207-17203.b\UXM6223.D
Limit Group: MSV 8260B ICAL
Integrator: RTE ID Type: Deconvolution ID
Column Type: DB-624 Column Dia: 0.18 mm
Process Host: XAWRK030

First Level Reviewer: williamsla Date: 26-Mar-2013 11:53:58

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.702	5.702	0.0	97	1697061	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.393	0.001	96	1087485	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	95	473041	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.121	5.121	0.0	55	374260	9.10	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	673504	9.65	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	96	1600073	8.96	
$ 8 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	76	507644	8.27	
14 Dichlorodifluoromethane	85		1.658					
15 Chloromethane	50		1.836					9
16 Vinyl chloride	62		1.966					
17 Bromomethane	94		2.298					9
18 Chloroethane	64		2.405					9
20 Trichlorofluoromethane	101		2.666					
24 1,1-Dichloroethene	96		3.152					
25 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
26 Acetone	43	3.188	3.188	0.0	94	112419	5.02	
28 Carbon disulfide	76	3.366	3.366	0.0	88	19802	0.1186	
32 Methylene Chloride	84	3.591	3.591	0.0	91	19575	0.2893	
33 2-Methyl-2-propanol	59		3.674					9
35 trans-1,2-Dichloroethene	96		3.852					9
36 Methyl tert-butyl ether	73		3.852					
38 1,1-Dichloroethane	63		4.207					
39 Vinyl acetate	86		4.243					
40 Isopropyl ether	87		4.279					
42 Tert-butyl ethyl ether	59		4.587					
44 2,2-Dichloropropane	77		4.717					
43 cis-1,2-Dichloroethene	96	4.706	4.717	-0.011	72	53010	0.8949	
45 2-Butanone (MEK)	43		4.717					9
49 Chlorobromomethane	128		4.919					
51 Chloroform	83		4.978					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
52 1,1,1-Trichloroethane	97		5.156					
54 1,1-Dichloropropene	75		5.298					
55 Carbon tetrachloride	117		5.310					
58 Benzene	78	5.476	5.476	0.0	92	29926	0.1158	
57 1,2-Dichloroethane	62		5.476					
59 Tert-amyl methyl ether	73		5.559					
63 Trichloroethene	130	6.022	6.022	0.0	86	915645	20.8	
65 1,2-Dichloropropane	63		6.212					
67 Dibromomethane	93		6.306					
69 Dichlorobromomethane	83		6.437					
71 2-Chloroethyl vinyl ether	63		6.686					
72 cis-1,3-Dichloropropene	75		6.828					
73 4-Methyl-2-pentanone (MIBK)	43		6.947					9
74 Toluene	91		7.137					
75 trans-1,3-Dichloropropene	75		7.314					
78 1,3-Dichloropropane	76		7.635					
79 Tetrachloroethene	164		7.646					9
80 2-Hexanone	43		7.694					9
83 Chlorodibromomethane	129		7.848					
85 Ethylene Dibromide	107		7.967					
86 Chlorobenzene	112		8.429					
87 1,1,1,2-Tetrachloroethane	131		8.488					
88 Ethylbenzene	106		8.524					
89 m-Xylene & p-Xylene	106		8.631					
91 o-Xylene	106		9.010					
90 Styrene	104		9.010					
92 Bromoform	173		9.188					
93 Isopropylbenzene	105		9.354					9
96 1,1,2,2-Tetrachloroethane	83		9.615					
97 Bromobenzene	156		9.662					
98 1,2,3-Trichloropropane	110		9.674					
100 N-Propylbenzene	120		9.757					
101 2-Chlorotoluene	126		9.840					
103 4-Chlorotoluene	126		9.947					
104 tert-Butylbenzene	119		10.243					
105 1,2,4-Trimethylbenzene	105		10.291					9
106 sec-Butylbenzene	105		10.457					
107 1,3-Dichlorobenzene	146		10.575					9
108 4-Isopropyltoluene	119		10.599					
109 1,4-Dichlorobenzene	146		10.658					9
110 1,2,3-Trimethylbenzene	105		10.706					9
111 n-Butylbenzene	91		11.002					9
112 1,2-Dichlorobenzene	146		11.026					
113 1,2-Dibromo-3-Chloropropane	157		11.797					
115 1,2,4-Trichlorobenzene	180		12.639					
116 Hexachlorobutadiene	225		12.817					
117 Naphthalene	128		12.888					9
118 1,2,3-Trichlorobenzene	180		13.149					
S 123 Xylenes, Total	106		16.530					

$\frac{915645 samp}{169706 Int} \times \frac{10 int}{0.2559 Ical} \times 2.5 DF = 52.09 \frac{ug}{L}$

reported as 52 ug/L

Sample Report

MRC-MW56B

Sample Table

Sample Name	240-22082-e-8-a
Data File Name	061SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1304
Acq Date Time	2013-04-01T17:31:03-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-95355 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

231.6 ug/L reported as 230 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	0.569	0.569	3.43	3974	2.58	3000	
Na	23	1	No Gas	OR	OR	#VALUE!	OR	#VALUE!	100000	
Mg	24	1	No Gas	22105.534	22105.534	2.04	631950002	0.93	112500	
Al	27	1	No Gas	366.495	366.495	12.02	13660942	12.97	4000	
K	39	1	No Gas	9568.305	9568.305	1.39	459724960	0.38	87500	
Ca	44	1	No Gas	54689.839	54689.839	0.88	82858757	0.49	225000	
V	51	1	No Gas	0.852	0.852	3.50	53763	2.34	4000	
Cr	52	1	No Gas	0.776	0.776	10.01	65921	5.94	4000	
Mn	55	1	No Gas	9716.779	9716.779	1.09	681767813	0.52	4000	>LDR
Fe	56	1	No Gas	13257.105	13257.105	0.83	750217410	1.11	40000	
Co	59	1	No Gas	231.676	231.676	0.85	13103003	0.80	4000	
Ni	60	1	No Gas	217.733	217.733	1.50	2737204	0.84	4000	
Cu	65	1	No Gas	0.791	0.791	3.77	15604	1.74	4000	
Zn	66	1	No Gas	228.629	228.629	1.21	1941587	0.77	2500	
As	75	1	No Gas	0.829	0.829	8.62	5455	8.64	4000	
Se	82	1	No Gas	0.048	0.048	577.77	68	210.07	4000	
Sr	88	1	No Gas	261.553	261.553	0.62	17628610	0.98	4000	
Mo	95	1	No Gas	0.298	0.298	3.52	4237	3.12	4000	
[Mo]	98	1	No Gas	0.257	0.257	3.95	5758	4.03	4000	
Ag	107	1	No Gas	0.018	0.018	18.64	626	15.42	100	
Cd	111	1	No Gas	0.129	0.129	8.23	897	7.41	4000	
[Cd]	114	1	No Gas	0.128	0.128	1.96	1943	1.47	4000	
Sn	118	1	No Gas	0.153	0.153	1.14	3605	0.97	4000	
Sb	123	1	No Gas	0.068	0.068	6.43	1575	5.25	4000	
Ba	137	1	No Gas	156.208	156.208	0.73	1401110	0.62	4000	
Ce	140	1	No Gas	3.013	3.013	1.51	249425	1.43	4000	
Tl	205	1	No Gas	0.090	0.090	3.30	4167	2.54	4000	
Pb	208	1	No Gas	0.285	0.285	2.15	20772	1.15	4000	
U	238	1	No Gas	0.061	0.061	3.04	3952	3.85	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	1086424	1.33	1173895	92.55	60	120	
Sc-45 (IS)	45	1	No Gas	4659789	1.33	5299577	87.93	60	120	
Ge (IS)	72	1	No Gas	895268	0.48	1050139	85.25	60	120	
Ge (IS)	74	1	No Gas	1244626	0.71	1468406	84.76	60	120	
In-115 (IS)	115	1	No Gas	5115470	0.38	6044712	84.63	60	120	
Tb-159 (IS)	159	1	No Gas	6728042	0.93	7417961	90.70	60	120	

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22082

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 3.16.13 Opened on 3.16.13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF –2 °C) Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	☐ Multiple on Back
IR GUN# 4G	(CF 0 °C) Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 5G	(CF 0 °C) Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 8	(CF 0 °C) Observed Sample Temp. 1.9 °C	Corrected Sample Temp. 1.9 °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

COC = 1x250 (HNO3) for 868@1227, Rec'd 2x250 will log

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
1025	<2	3-6-13	MS
1120	<2		
1340	<2		
1038	<2		
1227	<2 <2		
1550	<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22082-1

Login Number: 22082
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/22/13 03:30 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-22082-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW30A-031513	240-22082-1	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW31A-031513	240-22082-2	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
M	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW30A-031513	240-22082-1	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW31A-031513	240-22082-2	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
OS	UG/L	MRC-MW44A-031813	240-22125-4	NM	3/18/2013	3/21/2013	3/26/2013	3	5	8
OV	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	TB-031813	240-22125-9	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	TB-031513	240-22082-5	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW87A-031813	240-22125-8	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW34A-031513	240-22082-6	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW32A-031513	240-22082-3	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
PCB	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW43A-031813	240-22125-3	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW44A-031813	240-22125-4	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab File ID: UXM6999.D Lab Sample ID: MB 240-79378/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 03/25/2013 19:24

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-79378/4	UXM6997.D	03/25/2013 18:38
MRC-MW32A-031513	240-22082-3	UXM7000.D	03/25/2013 19:46
MRC-MW33A-031513	240-22082-4	UXM7001.D	03/25/2013 20:08
TB-031513	240-22082-5	UXM7002.D	03/25/2013 20:31
MRC-MW34A-031513	240-22082-6	UXM7003.D	03/25/2013 20:53
MRC-MW86A-031513	240-22082-7	UXM7004.D	03/25/2013 21:15
MRC-MW86B-031513	240-22082-8	UXM7005.D	03/25/2013 21:38
MRC-MW87B-031513	240-22082-9	UXM7006.D	03/25/2013 22:00

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79378/6

Matrix: Water | Lab File ID: UXM6999.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 19:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.24	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-79378/6

Matrix: Water Lab File ID: UXM6999.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 19:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	0.306	J	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22082-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79378/6

Matrix: Water | Lab File ID: UXM6999.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/25/2013 19:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79378 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-79378/6

Matrix: Water Lab File ID: UXM6999.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/25/2013 19:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79378 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6997.D

Lab ID: LCS 240-79378/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	19.4	97	43-136	
Benzene	10.0	9.65	97	83-112	
Bromobenzene	10.0	9.74	97	76-115	
Bromochloromethane	10.0	9.09	91	77-120	
Bromodichloromethane	10.0	9.19	92	72-121	
Bromoform	10.0	8.42	84	40-131	
Bromomethane	10.0	8.42	84	11-185	
2-Butanone	20.0	18.0	90	60-126	
Carbon disulfide	10.0	8.65	87	62-142	
Carbon tetrachloride	10.0	9.07	91	66-128	
Chlorobenzene	10.0	9.44	94	85-110	
Chloroethane	10.0	6.67	67	25-153	
2-Chloroethyl vinyl ether	10.0	8.46 J	85	52-131	
Chloroform	10.0	9.19	92	79-117	
Chloromethane	10.0	10.9	109	44-126	
2-Chlorotoluene	10.0	9.44	94	76-116	
4-Chlorotoluene	10.0	9.49	95	77-115	
cis-1,2-Dichloroethene	10.0	9.17	92	80-113	
cis-1,3-Dichloropropene	10.0	8.32	83	61-115	
Dibromochloromethane	10.0	8.67	87	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.53	85	42-136	
1,2-Dibromoethane	10.0	8.99	90	79-113	
Dibromomethane	10.0	9.41	94	81-120	
1,2-Dichlorobenzene	10.0	9.87	99	81-110	
1,3-Dichlorobenzene	10.0	9.54	95	80-110	
1,4-Dichlorobenzene	10.0	9.41	94	82-110	
Dichlorodifluoromethane	10.0	15.1	151	19-129	*
1,1-Dichloroethane	10.0	9.03	90	82-115	
1,2-Dichloroethane	10.0	9.53	95	71-127	
1,1-Dichloroethene	10.0	9.62	96	78-131	
1,2-Dichloropropane	10.0	9.59	96	81-115	
1,3-Dichloropropane	10.0	9.43	94	79-116	
2,2-Dichloropropane	10.0	7.76	78	50-129	
1,1-Dichloropropene	10.0	9.65	96	83-114	
Diisopropyl ether	10.0	9.16	92	77-118	
Ethylbenzene	10.0	9.58	96	83-112	
Hexachlorobutadiene	10.0	10.7	107	36-134	
2-Hexanone	20.0	18.5	93	55-133	
Isopropylbenzene	10.0	9.61	96	75-114	
Methylene Chloride	10.0	8.50	85	66-131	
4-Methyl-2-pentanone	20.0	17.5	88	63-128	
Methyl tert-butyl ether	10.0	7.87	79	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6997.D

Lab ID: LCS 240-79378/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.5	98	83-113	
Naphthalene	10.0	9.74	97	32-141	
n-Butylbenzene	10.0	10.2	102	66-125	
n-Propylbenzene	10.0	10.3	103	74-121	
o-Xylene	10.0	9.60	96	83-113	
p-Isopropyltoluene	10.0	10.6	106	74-120	
sec-Butylbenzene	10.0	10.2	102	70-117	
Styrene	10.0	8.58	86	79-114	
tert-Butyl alcohol	200	162	81	70-130	
tert-Butylbenzene	10.0	9.91	99	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.43	94	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.86	89	68-118	
Tetrachloroethene	10.0	9.65	97	79-114	
Toluene	10.0	9.32	93	84-111	
trans-1,2-Dichloroethene	10.0	9.08	91	83-117	
trans-1,3-Dichloropropene	10.0	8.06	81	58-117	
1,2,3-Trichlorobenzene	10.0	10.4	104	54-126	
1,2,4-Trichlorobenzene	10.0	9.84	98	48-135	
1,1,1-Trichloroethane	10.0	8.42	84	74-118	
Trichloroethene	10.0	9.45	94	76-117	
Trichlorofluoromethane	10.0	21.2	212	49-157	*
1,2,3-Trichloropropane	10.0	9.18	92	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	15.4	154	74-151	*
1,2,3-Trimethylbenzene	10.0	11.7	117	70-130	
1,2,4-Trimethylbenzene	10.0	10.0	100	76-120	
Vinyl acetate	10.0	7.15	71	46-161	
Vinyl chloride	10.0	10.0	100	53-127	
Xylenes, Total	30.0	29.1	97	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MRC-MW32A-031513	240-22082-3	84	90	85	80
MRC-MW33A-031513	240-22082-4	88	92	87	80
TB-031513	240-22082-5	85	90	82	77
MRC-MW34A-031513	240-22082-6	88	95	87	81
MRC-MW86A-031513	240-22082-7	85	89	83	78
MRC-MW86B-031513	240-22082-8	88	91	86	81
MRC-MW87B-031513	240-22082-9	89	95	88	81
	MB 240-79378/6	84	89	86	80
	LCS 240-79378/4	86	87	90	93

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab File ID: BFB3402.D BFB Injection Date: 11/27/2012

Instrument ID: A3UX16 BFB Injection Time: 15:03

Analysis Batch No.: 66473

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.5	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.3)1
176	95.0 - 101.0 % of mass 174	71.2	(95.1)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-66473/8	UXM9089.D	11/27/2012	17:59
	STD2 240-66473/9	UXM9090.D	11/27/2012	18:22
	STD3 240-66473/10	UXM9091.D	11/27/2012	18:44
	STD4 240-66473/11	UXM9092.D	11/27/2012	19:07
	STD5 240-66473/12	UXM9093.D	11/27/2012	19:30
	STD6 240-66473/13	UXM9094.D	11/27/2012	19:53

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-22082-1 | Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 | Calibration End Date: 11/27/2012 19:53 | Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6395 0.5790	0.5949	0.6191	0.5701	0.5598	Ave		0.5937				5.1		15.0			
Ethyl ether	0.2957 0.2913	0.2805	0.3162	0.2908	0.2785	Ave		0.2922				4.6		15.0			
3-Chloro-1-propene	0.1657 0.1816	0.1589	0.1747	0.1684	0.1734	Ave		0.1704				4.6		15.0			
Diisopropyl ether	0.2885 0.3072	0.2714	0.3042	0.2883	0.2921	Ave		0.2920				4.4		15.0			
2-Chloro-1,3-butadiene	0.5541 0.6319	0.5394	0.6027	0.5733	0.5814	Ave		0.5805				5.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.9712 1.0865	0.9515	1.0602	1.0211	1.0411	Ave		1.0219				5.1		15.0			
Propionitrile	0.0336 0.0410	0.0390	0.0380	0.0379	0.0392	Ave		0.0381				6.4		15.0			
Ethyl acetate	0.2415 0.2708	0.2384	0.2467	0.2536	0.2545	Ave		0.2509				4.6		15.0			
Methacrylonitrile	0.2017 0.1992	0.1750	0.1941	0.1858	0.1896	Ave		0.1909				5.1		15.0			
Isobutyl alcohol	0.0071 0.0081	0.0070	0.0072	0.0075	0.0077	Ave		0.0074				5.5		15.0			
Tert-amyl-methyl ether (TAME)	0.7918 0.9098	0.8105	0.8835	0.8488	0.8716	Ave		0.8526				5.3		15.0			
n-Heptane	0.0550 0.0612	0.0566	0.0534	0.0500	0.0453	Ave		0.0536				10.0		15.0			
n-Butanol	0.0039 0.0055	0.0047	0.0054	0.0053	0.0055	Ave		0.0051				13.0		15.0			
Methyl methacrylate	0.2010 0.2422	0.1999	0.2231	0.2243	0.2270	Ave		0.2196				7.4		15.0			
2-Nitropropane	0.0355 +++++	0.0470	0.0403	0.0428	0.0485	Ave		0.0428				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22082-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0937 0.0872	0.0965	0.1030	0.0923	0.0852	Ave		0.0930				6.9		15.0			
1,2,3-Trimethylbenzene	2.4010 2.9673	2.3401	2.6960	2.6868	2.7750	Ave		2.6444				8.9		15.0			
2-Methylnaphthalene	0.8663 +++++	1.0537	1.0510	0.9969	0.7520	Ave		0.9440				14.0		15.0			
n-Butyl acetate	0.3213 0.3680	0.3124	0.3343	0.3499	0.3540	Ave		0.3400				6.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab File ID: BFB297.D BFB Injection Date: 02/07/2013

Instrument ID: A3UX16 BFB Injection Time: 12:56

Analysis Batch No.: 74618

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.9	
75	30.0 - 60.0 % of mass 95	56.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	51.6	
175	5.0 - 9.0 % of mass 174	3.4	(6.5)1
176	95.0 - 101.0 % of mass 174	50.1	(97.1)1
177	5.0 - 9.0 % of mass 176	3.4	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-74618/2	UXM6218.D	02/07/2013	13:27
	STD8260 240-74618/3	UXM6219.D	02/07/2013	13:50
	STD8260 240-74618/4	UXM6220.D	02/07/2013	14:12
	STD8260 240-74618/5	UXM6221.D	02/07/2013	14:35
	STD8260 240-74618/6	UXM6222.D	02/07/2013	14:58
	STD8260 240-74618/7	UXM6223.D	02/07/2013	15:20
	ICV 240-74618/8	UXM6224.D	02/07/2013	15:43

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-22082-1 | Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 | Calibration End Date: 02/07/2013 15:20 | Calibration ID: 13620

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74618/7	UXM6223.D
Level 2	STD8260 240-74618/6	UXM6222.D
Level 3	STD8260 240-74618/5	UXM6221.D
Level 4	STD8260 240-74618/4	UXM6220.D
Level 5	STD8260 240-74618/3	UXM6219.D
Level 6	STD8260 240-74618/2	UXM6218.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1655 0.2139	0.1950	0.2117	0.2250	0.1770	Ave		0.1980				12.0		15.0			
Chloromethane	0.5058 0.4534	0.4913	0.4685	0.4467	0.4652	Ave		0.4718			0.1000	4.8		15.0			
Vinyl chloride	0.4479 0.4349	0.4543	0.4578	0.4328	0.4507	Ave		0.4464				2.3		15.0			
Bromomethane	0.1647 0.1134	0.1618	0.1243	0.1362	0.1072	Lin1	0.0733	0.1117							0.9930		0.9900
Chloroethane	0.3008 0.2699	0.2633	0.2651	0.2622	0.2584	Ave		0.2699				5.8		15.0			
Trichlorofluoromethane	0.1945 0.1767	0.1777	0.1872	0.1834	0.1598	Ave		0.1799				6.6		15.0			
Acrolein	0.0621 0.0714	0.0629	0.0667	0.0657	0.0611	Ave		0.0650				5.9		15.0			
1,1-Dichloroethene	0.2925 0.3178	0.2976	0.2885	0.2944	0.2961	Ave		0.2978				3.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1277 0.1255	0.1102	0.1219	0.1299	0.1021	Ave		0.1196				9.2		15.0			
Acetone	0.1631 0.1304	0.1249	0.1382	0.1245	0.1110	Ave		0.1320				13.0		15.0			
Iodomethane	0.3203 0.3505	0.3484	0.3203	0.3182	0.3277	Ave		0.3309				4.5		15.0			
Carbon disulfide	0.9006 1.1662	0.9102	0.9141	0.9835	1.0269	Ave		0.9836				10.0		15.0			
Acetonitrile	0.0501 0.0501	0.0368	0.0476	0.0422	0.0348	Ave		0.0436				15.0 ✓		15.0			
Methyl acetate	0.3200 0.3183	0.3023	0.3159	0.3003	0.2851	Ave		0.3070				4.4		15.0			
Methylene Chloride	0.4848 0.3837	0.4381	0.3679	0.3537	0.3640	Ave		0.3987				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22082-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0199 0.0200	0.0154	0.0200	0.0182	0.0142	Ave		0.0180				14.0		15.0			
Acrylonitrile	0.1454 0.1558	0.1411	0.1518	0.1445	0.1383	Ave		0.1462				4.5		15.0			
Methyl tert-butyl ether	0.9103 1.0586	0.9378	0.9098	0.9208	0.9452	Ave		0.9471				6.0		15.0			
trans-1,2-Dichloroethene	0.3352 0.3614	0.3383	0.3201	0.3225	0.3390	Ave		0.3361				4.4		15.0			
Hexane	0.0729 0.0745	0.0604	0.0768	0.0775	0.0594	Ave		0.0703				12.0		15.0			
1,1-Dichloroethane	0.7047 0.7867	0.7510	0.6985	0.6925	0.7265	Ave		0.7266			0.1000	5.0		15.0			
Vinyl acetate	0.0486 0.0680	0.0460	0.0541	0.0579	0.0610	Ave		0.0560				15.0		15.0			
2-Butanone	0.1932 0.1741	0.1465	0.1768	0.1602	0.1554	Ave		0.1677				10.0		15.0			
cis-1,2-Dichloroethene	0.3362 0.3742	0.3651	0.3392	0.3299	0.3496	Ave		0.3490				5.0		15.0			
2,2-Dichloropropane	0.2813 0.3509	0.2981	0.2821	0.3032	0.3241	Ave		0.3066				8.7		15.0			
Bromochloromethane	0.1382 0.1411	0.1314	0.1248	0.1258	0.1302	Ave		0.1319				5.0		15.0			
Tetrahydrofuran	0.2003 0.1123	0.1251	0.1133	0.1091	0.0977	Lin1	0.0706	0.1042							0.9920		0.9900
Chloroform	0.5694 0.6344	0.6062	0.5689	0.5595	0.5889	Ave		0.5879				4.8		15.0			
1,1,1-Trichloroethane	0.3357 0.4198	0.3545	0.3585	0.3720	0.3793	Ave		0.3700				7.8		15.0			
Cyclohexane	0.6018 0.7292	0.5994	0.6741	0.7267	0.6358	Ave		0.6611				8.8		15.0			
1,1-Dichloropropene	0.4526 0.5465	0.4899	0.4801	0.4880	0.4937	Ave		0.4918				6.2		15.0			
Carbon tetrachloride	0.2047 0.2871	0.2145	0.2204	0.2455	0.2522	Ave		0.2374				13.0		15.0			
1,2-Dichloroethane	0.5136 0.5650	0.5326	0.4994	0.4893	0.5154	Ave		0.5192				5.2		15.0			
Benzene	1.5256 1.6847	1.5537	1.4382	1.4263	1.5081	Ave		1.5228				6.2		15.0			
Trichloroethene	0.2530 0.2800	0.2635	0.2536	0.2460	0.2572	Ave		0.2589				4.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22082-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4063 0.5136	0.3939	0.4873	0.5164	0.4219	Ave		0.4566				12.0		15.0			
1,2-Dichloropropane	0.3429 0.4213	0.3676	0.3520	0.3598	0.3788	Ave		0.3704				7.5		15.0			
Dibromomethane	0.1600 0.1800	0.1687	0.1666	0.1599	0.1642	Ave		0.1666				4.5		15.0			
1,4-Dioxane	0.0022 0.0021	0.0014	0.0024	0.0019	0.0018	Qua	0.0828	0.0015	0						0.9960		0.9900
Bromodichloromethane	0.2757 0.4230	0.3164	0.3178	0.3358	0.3740	Ave		0.3405				15.0		15.0			
2-Chloroethyl vinyl ether	0.1018 0.1952	0.1176	0.1452	0.1527	0.1656	Lin1	-0.250	0.1854							0.9920		0.9900
cis-1,3-Dichloropropene	0.3128 0.5541	0.3599	0.3850	0.4141	0.4734	Qua	-0.115	0.3937	0.0041						1.0000		0.9900
4-Methyl-2-pentanone	0.2461 0.3546	0.2660	0.3018	0.3036	0.3113	Ave		0.2972				13.0		15.0			
Toluene	2.0335 2.4081	2.1481	2.0452	2.0049	2.1647	Ave		2.1341				7.0		15.0			
trans-1,3-Dichloropropene	0.3834 0.6923	0.4261	0.4661	0.5171	0.5955	Qua	-0.207	0.5016	0.0049						1.0000		0.9900
Ethyl methacrylate	0.3855 0.6573	0.4366	0.5000	0.5368	0.5946	Lin1	-0.374	0.6353							0.9950		0.9900
1,1,2-Trichloroethane	0.3513 0.3794	0.3500	0.3495	0.3401	0.3596	Ave		0.3550				3.8		15.0			
1,3-Dichloropropane	0.7041 0.8219	0.7485	0.7309	0.7176	0.7566	Ave		0.7466				5.6		15.0			
Tetrachloroethene	0.2394 0.2779	0.2485	0.2456	0.2474	0.2555	Ave		0.2524				5.4		15.0			
2-Hexanone	0.2555 0.3273	0.2530	0.2844	0.2914	0.3021	Ave		0.2856				9.9		15.0			
Dibromochloromethane	0.1965 0.3239	0.2072	0.2257	0.2453	0.2777	Qua	-0.067	0.2326	0.0023						1.0000		0.9900
1,2-Dibromoethane	0.2819 0.3505	0.3047	0.3100	0.3178	0.3332	Ave		0.3163				7.5		15.0			
Chlorobenzene	1.0721 1.2059	1.1200	1.0795	1.0433	1.1272	Ave		1.1080			0.3000	5.2		15.0			
1,1,1,2-Tetrachloroethane	0.2433 0.3561	0.2660	0.2702	0.2948	0.3211	Ave		0.2919				14.0		15.0			
Ethylbenzene	0.5250 0.6926	0.5782	0.5894	0.5867	0.6324	Ave		0.6007				9.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22082-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6327 0.9012	0.7126	0.7222	0.7393	0.8059	Ave		0.7523				12.0		15.0			
o-Xylene	0.6506 0.8703	0.7179	0.7372	0.7408	0.8089	Ave		0.7543				10.0		15.0			
Styrene	0.9693 1.4883	1.0506	1.1070	1.1627	1.3150	Lin1	-0.754	1.4178							0.9920		0.9900
Bromoform	0.0819 0.1516	0.0895	0.0988	0.1100	0.1259	Qua	-0.031	0.1013	0.0013		0.1000				1.0000		0.9900
Isopropylbenzene	1.4947 2.1214	1.6455	1.7370	1.7894	1.9033	Ave		1.7819				12.0		15.0			
1,1,2,2-Tetrachloroethane	0.9920 1.0231	1.0892	1.0509	1.0781	1.0457	Ave		1.0465			0.3000	3.4		15.0			
Bromobenzene	0.6528 0.7862	0.7346	0.7241	0.7347	0.7560	Ave		0.7314				6.1		15.0			
1,2,3-Trichloropropane	0.2749 0.2747	0.2936	0.2771	0.2874	0.2758	Ave		0.2806				2.8		15.0			
trans-1,4-Dichloro-2-butene	0.2602 0.3393	0.2990	0.2853	0.3115	0.3150	Ave		0.3017				9.0		15.0			
n-Propylbenzene	0.6560 0.9449	0.7868	0.8024	0.8571	0.8933	Ave		0.8234				12.0		15.0			
2-Chlorotoluene	0.7071 0.8315	0.7838	0.7649	0.7981	0.8052	Ave		0.7818				5.5		15.0			
1,3,5-Trimethylbenzene	2.2287 3.2654	2.5753	2.7581	2.9169	3.0305	Ave		2.7958				13.0		15.0			
4-Chlorotoluene	0.7086 0.8957	0.8509	0.7967	0.8218	0.8621	Ave		0.8226				7.9		15.0			
tert-Butylbenzene	1.8732 2.6788	2.1545	2.3587	2.4660	2.5571	Ave		2.3480				12.0		15.0			
1,2,4-Trimethylbenzene	2.3218 3.3539	2.7540	2.9061	2.9666	3.1301	Ave		2.9054				12.0		15.0			
sec-Butylbenzene	2.3987 3.5071	2.7725	3.0430	3.1790	3.2957	Ave		3.0327				13.0		15.0			
1,3-Dichlorobenzene	1.3883 1.5034	1.4458	1.4409	1.3903	1.4513	Ave		1.4367				3.0		15.0			
p-Isopropyltoluene	1.8920 2.7941	2.0620	2.3493	2.4668	2.5988	Ave		2.3605				14.0		15.0			
1,4-Dichlorobenzene	1.4766 1.5820	1.5509	1.5101	1.4725	1.5285	Ave		1.5201				2.8		15.0			
n-Butylbenzene	1.9276 2.7241	2.0408	2.2530	2.3479	2.5383	Ave		2.3053				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22082-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3922 1.4327	1.4047	1.3988	1.3238	1.4189	Ave		1.3952				2.7		15.0			
1,2-Dibromo-3-Chloropropane	0.0956 0.0865	0.0733	0.0919	0.0855	0.0925	Ave		0.0875				9.1		15.0			
1,3,5-Trichlorobenzene	0.7274 0.6156	0.6578	0.7250	0.6145	0.6672	Ave		0.6679				7.5		15.0			
1,2,4-Trichlorobenzene	0.6586 0.5021	0.5654	0.6525	0.5249	0.5808	Ave		0.5807				11.0		15.0			
Hexachlorobutadiene	0.2419 +++++	0.2174	0.2428	0.2049	0.2005	Ave		0.2215				9.0		15.0			
Naphthalene	1.8396 1.5435	1.5783	2.0618	1.7042	1.8696	Ave		1.7662				11.0		15.0			
1,2,3-Trichlorobenzene	0.5910 +++++	0.4794	0.6204	0.4598	0.4810	Ave		0.5263				14.0		15.0			
Dibromofluoromethane (Surr)	0.2318 0.2635	0.2444	0.2333	0.2312	0.2505	Ave		0.2425				5.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4018 0.4434	0.4134	0.4080	0.3932	0.4073	Ave		0.4112				4.2		15.0			
Toluene-d8 (Surr)	1.4581 1.8629	1.6195	1.6043	1.5883	1.7170	Ave		1.6417				8.3		15.0			
4-Bromofluorobenzene (Surr)	0.5145 0.6364	0.5417	0.5528	0.5472	0.5940	Ave		0.5645				7.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab File ID: BFB3530.D BFB Injection Date: 03/25/2013

Instrument ID: A3UX16 BFB Injection Time: 16:53

Analysis Batch No.: 79378

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.1	
75	30.0 - 60.0 % of mass 95	53.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	54.8	
175	5.0 - 9.0 % of mass 174	3.7	(6.8)1
176	95.0 - 101.0 % of mass 174	53.0	(96.8)1
177	5.0 - 9.0 % of mass 176	3.4	(6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-79378/2	UXM6995.D	03/25/2013	17:48
	CCV 240-79378/3	UXM6996.D	03/25/2013	18:16
	LCS 240-79378/4	UXM6997.D	03/25/2013	18:38
	MB 240-79378/6	UXM6999.D	03/25/2013	19:24
MRC-MW32A-031513	240-22082-3	UXM7000.D	03/25/2013	19:46
MRC-MW33A-031513	240-22082-4	UXM7001.D	03/25/2013	20:08
TB-031513	240-22082-5	UXM7002.D	03/25/2013	20:31
MRC-MW34A-031513	240-22082-6	UXM7003.D	03/25/2013	20:53
MRC-MW86A-031513	240-22082-7	UXM7004.D	03/25/2013	21:15
MRC-MW86B-031513	240-22082-8	UXM7005.D	03/25/2013	21:38
MRC-MW87B-031513	240-22082-9	UXM7006.D	03/25/2013	22:00

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab Sample ID: CCVIS 240-79378/2 Calibration Date: 03/25/2013 17:48

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6995.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.3861		1.00	0.0100	95.0*	50.0
Chloromethane	Ave	0.4718	0.5887	0.1000	1.00	0.0100	24.8	50.0
Vinyl chloride	Ave	0.4464	0.4938		1.00	0.0100	10.6	20.0
Bromomethane	Lin1		0.1239		1.00	0.0100	4.4	50.0
Chloroethane	Ave	0.2699	0.2114		1.00	0.0100	-21.7	50.0
Trichlorofluoromethane	Ave	0.1799	0.3820		1.00	0.0100	112.4*	50.0
Acrolein	Ave	0.0650	0.0631		20.0	0.100	-2.9	50.0
1,1-Dichloroethene	Ave	0.2978	0.3110		1.00	0.0100	4.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1735		1.00	0.0100	45.1	50.0
Acetone	Ave	0.1320	0.1212		10.0	0.0200	-8.2	50.0
Iodomethane	Ave	0.3309	0.3979		1.00	0.0100	20.3	50.0
Carbon disulfide	Ave	0.9836	0.9737		1.00	0.0100	-1.0	50.0
Acetonitrile	Ave	0.0436	0.0524		20.0	0.100	20.3	50.0
Methyl acetate	Ave	0.3070	0.2870		10.0	0.0200	-6.5	50.0
Methylene Chloride	Ave	0.3987	0.3822		1.00	0.0100	-4.1	50.0
tert-Butyl alcohol	Ave	0.0180	0.0170		50.0	0.200	-5.5	50.0
Acrylonitrile	Ave	0.1462	0.1398		20.0	0.0200	-4.4	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8532		1.00	0.0100	-9.9	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3446		1.00	0.0100	2.5	50.0
Hexane	Ave	0.0703	0.0725		1.00	0.0100	3.2	20.0
1,1-Dichloroethane	Ave	0.7266	0.7175	0.1000	1.00	0.0100	-1.3	50.0
Vinyl acetate	Ave	0.0560	0.0586		2.00	0.0100	4.7	50.0
2,2-Dichloropropane	Ave	0.3066	0.2721		1.00	0.0100	-11.3	50.0
2-Butanone	Ave	0.1677	0.1559		10.0	0.0200	-7.0	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3527		1.00	0.0100	1.0	50.0
Bromochloromethane	Ave	0.1319	0.1375		1.00	0.0100	4.2	50.0
Tetrahydrofuran	Lin1		0.0963		5.00	0.0100	-14.4	50.0
Chloroform	Ave	0.5879	0.5980		1.00	0.0100	1.7	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3450		1.00	0.0100	-6.8	50.0
Cyclohexane	Ave	0.6611	0.6884		1.00	0.0100	4.1	50.0
1,1-Dichloropropene	Ave	0.4918	0.5210		1.00	0.0100	5.9	50.0
Carbon tetrachloride	Ave	0.2374	0.2430		1.00	0.0100	2.3	50.0
1,2-Dichloroethane	Ave	0.5192	0.5279		1.00	0.0100	1.7	50.0
Benzene	Ave	1.523	1.578		1.00	0.0100	3.6	50.0
Trichloroethene	Ave	0.2589	0.2708		1.00	0.0100	4.6	50.0
1,2-Dichloropropane	Ave	0.3704	0.3936		1.00	0.0100	6.3	20.0
Methylcyclohexane	Ave	0.4566	0.4566		1.00	0.0100	0.0	50.0
Dibromomethane	Ave	0.1666	0.1707		1.00	0.0100	2.5	50.0
1,4-Dioxane	Qua		0.0031		50.0	0.500	68.4*	50.0
Bromodichloromethane	Ave	0.3405	0.3469		1.00	0.0100	1.9	50.0

FORM VII 8260B

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab Sample ID: CCVIS 240-79378/2 Calibration Date: 03/25/2013 17:48

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6995.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.1637		10.0	0.0200	-4.9	50.0
cis-1,3-Dichloropropene	Qua		0.4271		1.00	0.0100	0.8	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2880		10.0	0.0200	-3.1	50.0
Toluene	Ave	2.134	2.162		1.00	0.0100	1.3	20.0
trans-1,3-Dichloropropene	Qua		0.4983		1.00	0.0100	-5.3	50.0
Ethyl methacrylate	Lin1		0.5397		1.00	0.0100	-9.2	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3601		1.00	0.0100	1.4	50.0
1,3-Dichloropropane	Ave	0.7466	0.7678		1.00	0.0100	2.8	50.0
Tetrachloroethene	Ave	0.2524	0.2627		1.00	0.0100	4.1	50.0
2-Hexanone	Ave	0.2856	0.2841		10.0	0.0200	-0.5	50.0
Dibromochloromethane	Qua		0.2522		1.00	0.0100	1.1	50.0
1,2-Dibromoethane	Ave	0.3163	0.3167		1.00	0.0100	0.1	50.0
Chlorobenzene	Ave	1.108	1.171	0.3000	1.00	0.0100	5.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.3075		1.00	0.0100	5.3	50.0
Ethylbenzene	Ave	0.6007	0.6280		1.00	0.0100	4.5	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.8130		2.00	0.0200	8.1	50.0
o-Xylene	Ave	0.7543	0.7825		1.00	0.0100	3.7	50.0
Styrene	Lin1		1.257		1.00	0.0100	-6.0	50.0
Bromoform	Qua		0.1081	0.1000	1.00	0.0100	-2.2	50.0
Isopropylbenzene	Ave	1.782	1.850		1.00	0.0100	3.8	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9771	0.3000	1.00	0.0100	-6.6	50.0
Bromobenzene	Ave	0.7314	0.7782		1.00	0.0100	6.4	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2638		1.00	0.0100	-6.0	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.2250		1.00	0.0100	-25.4	50.0
n-Propylbenzene	Ave	0.8234	0.8945		1.00	0.0100	8.6	50.0
2-Chlorotoluene	Ave	0.7818	0.8314		1.00	0.0100	6.3	50.0
1,3,5-Trimethylbenzene	Ave	2.796	3.023		1.00	0.0100	8.1	50.0
4-Chlorotoluene	Ave	0.8226	0.8824		1.00	0.0100	7.3	50.0
tert-Butylbenzene	Ave	2.348	2.569		1.00	0.0100	9.4	50.0
1,2,4-Trimethylbenzene	Ave	2.905	3.166		1.00	0.0100	9.0	50.0
sec-Butylbenzene	Ave	3.033	3.358		1.00	0.0100	10.7	50.0
1,3-Dichlorobenzene	Ave	1.437	1.512		1.00	0.0100	5.3	50.0
p-Isopropyltoluene	Ave	2.361	2.664		1.00	0.0100	12.9	50.0
1,4-Dichlorobenzene	Ave	1.520	1.607		1.00	0.0100	5.7	50.0
n-Butylbenzene	Ave	2.305	2.600		1.00	0.0100	12.8	50.0
1,2-Dichlorobenzene	Ave	1.395	1.522		1.00	0.0100	9.1	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0839		2.00	0.0100	-4.2	50.0
1,3,5-Trichlorobenzene	Ave	0.6679	0.8474		1.00	0.0100	26.9	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.7763		1.00	0.0100	33.7	50.0
Hexachlorobutadiene	Ave	0.2215	0.3410		1.00	0.0100	53.9*	50.0
Naphthalene	Ave	1.766	2.172		1.00	0.0100	23.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab Sample ID: CCVIS 240-79378/2 Calibration Date: 03/25/2013 17:48

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6995.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5263	0.7730		1.00	0.0100	46.9	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2085		0.00878	0.0102	-14.0	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3473		0.00862	0.0102	-15.5	50.0
Toluene-d8 (Surr)	Ave	1.642	1.426		0.00887	0.0102	-13.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.4911		0.00888	0.0102	-13.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Lab Sample ID: CCV 240-79378/3 Calibration Date: 03/25/2013 18:16

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM6996.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5937	0.6018		2.00	0.0100	1.4	50.0
Ethyl ether	Ave	0.2922	0.3293		2.00	0.0100	12.7	50.0
3-Chloro-1-propene	Ave	0.1704	0.1505		2.00	0.0100	-11.7	50.0
Diisopropyl ether	Ave	0.2920	0.2956		10.0	0.0500	1.2	50.0
2-Chloro-1,3-butadiene	Ave	0.5805	0.6593		2.00	0.0100	13.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	1.022	0.8990		5.00	0.0100	-12.0	50.0
Propionitrile	Ave	0.0381	0.0471	OK	4.00	0.0200	23.4	OK 50.0
Ethyl acetate	Ave	0.2509	0.3135		4.00	0.0200	24.9	OK 50.0
Methacrylonitrile	Ave	0.1909	0.2186		2.00	0.0100	14.5	50.0
Isobutyl alcohol	Ave	0.0074	0.0084	OK	50.0	0.200	12.4	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.8526	0.6400		5.00	0.0100	-24.9	OK 50.0
n-Heptane	Ave	0.0536	0.0689		1.00	0.0100	28.6	OK 50.0
n-Butanol	Ave	0.0051	0.0050	OK	50.0	0.200	-0.6	50.0
Methyl methacrylate	Ave	0.2196	0.2721		2.00	0.0100	23.9	OK 50.0
2-Nitropropane	Ave	0.0428	0.0429	OK	2.00	0.0200	0.2	50.0
Cyclohexanone	Ave	0.0930	0.1208		20.0	0.100	29.9	OK 50.0
1,2,3-Trimethylbenzene	Ave	2.644	3.131		0.0118	0.0100	18.4	50.0
2-Methylnaphthalene	Ave	0.9440	0.5295		5.00	0.0200	-43.9	OK 50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Sample No.: STD8260 240-74618/4 Date Analyzed: 02/07/2013 14:12

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6220.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2086115	5.70	1321775	8.39	620128	10.64
UPPER LIMIT		4172230	6.20	2643550	8.89	1240256	11.14
LOWER LIMIT		1043058	5.20	660888	7.89	310064	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-74618/8		1919196	5.70	1214489	8.39	624981	10.64
CCVIS 240-79378/2		2164761	5.70	1416071	8.39	694173	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22082-1

SDG No.:

Sample No.: CCVIS 240-79378/2 Date Analyzed: 03/25/2013 17:48

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6995.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2164761	5.70	1416071	8.39	694173	10.64
UPPER LIMIT		4329522	6.20	2832142	8.89	1388346	11.14
LOWER LIMIT		1082381	5.20	708036	7.89	347087	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-79378/3		2218067	5.70	1450353	8.39	622326	10.64
LCS 240-79378/4		2036616	5.70	1299739	8.39	641518	10.64
MB 240-79378/6		1885007	5.70	1196253	8.39	534415	10.64
240-22082-3	MRC-MW32A-031513	1834228	5.70	1184754	8.39	511595	10.64
240-22082-4	MRC-MW33A-031513	1775497	5.70	1151554	8.39	492159	10.64
240-22082-5	TB-031513	1848013	5.70	1219180	8.39	524741	10.64
240-22082-6	MRC-MW34A-031513	1755939	5.70	1118093	8.39	492256	10.64
240-22082-7	MRC-MW86A-031513	1767247	5.70	1119291	8.39	498521	10.64
240-22082-8	MRC-MW86B-031513	1735395	5.70	1110598	8.39	486325	10.64
240-22082-9	MRC-MW87B-031513	1697061	5.70	1087485	8.39	473041	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22082-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22082-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22082-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22082-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22082-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-94917/1-A	03/29/2013 10:56	94917		20	20
LCS 440-94917/2-A	03/29/2013 10:56	94917		20	20
240-22082-2	03/29/2013 10:56	94917		20	20
240-22082-2 MS	03/29/2013 10:56	94917		20	20
240-22082-2 MSD	03/29/2013 10:56	94917		20	20
240-22082-1	03/29/2013 10:56	94917		20	20
240-22082-4	03/29/2013 10:56	94917		20	20
240-22082-7	03/29/2013 10:56	94917		20	20
240-22082-8	03/29/2013 10:56	94917		20	20
240-22082-9	03/29/2013 10:56	94917		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-94917/1-A

Instrument Code: CV-HG2 Batch No.: 95140

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW31A-031513 MS
Lab ID: 240-22082-2 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22082-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.35		0.20	U	8.00	104	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW31A-031513 MSD
Lab ID: 240-22082-2 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22082-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.09	8.00	101	70-130	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-94917/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00074

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.03		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 14:20

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-94935/6-A	1		12:52	X
IC 440-94935/7-A	1		12:55	X
IC 440-94935/8-A	1		12:57	X
IC 440-94935/9-A	1		12:59	X
IC 440-94935/10-A	1		13:02	X
IC 440-94935/11-A	1		13:04	X
ICV 440-94935/1-A	1		13:07	X
ICB 440-94935/2-A	1		13:09	X
CRA 440-94935/5-A	1		13:12	X
ZZZZZZ			13:14	
ZZZZZZ			13:17	
ZZZZZZ			13:19	
ZZZZZZ			13:22	
ZZZZZZ			13:24	
ZZZZZZ			13:27	
CCV 440-94935/3-A	1		13:29	X
CCB 440-94935/4-A	1		13:32	X
MB 440-94917/1-A	1	T	13:34	X
LCS 440-94917/2-A	1	T	13:37	X
240-22082-2	1	T	13:39	X
240-22082-2 MS	1	T	13:41	X
240-22082-2 MSD	1	T	13:44	X
ZZZZZZ			13:46	
CCV 440-94935/3-A	1		13:48	X
CCB 440-94935/4-A	1		13:51	X
ZZZZZZ			13:54	
ZZZZZZ			13:56	
ZZZZZZ			13:59	
ZZZZZZ			14:01	
ZZZZZZ			14:04	
ZZZZZZ			14:06	
ZZZZZZ			14:08	
ZZZZZZ			14:11	
ZZZZZZ			14:13	
ZZZZZZ			14:16	
CCV 440-94935/3-A			14:18	
CCB 440-94935/4-A			14:20	

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

ICV Source: ME 1PPM HG2_00072 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00074

Analyte	ICV 440-94935/1-A 03/29/2013 13:07				CCV 440-94935/3-A 03/29/2013 13:29				CCV 440-94935/3-A 03/29/2013 13:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.15		8.00	102	4.21		4.00	105	4.16		4.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-94935/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.214		107	50-150

Lab Sample ID: CRA 440-94935/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.214		107	50-150

Lab Sample ID: CRA 440-94935/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.209		104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-94935/2-A 03/29/2013 13:09		CCB 440-94935/4-A 03/29/2013 13:32		CCB 440-94935/4-A 03/29/2013 13:51			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 18:02

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-94935/6-A	1		12:52	X
IC 440-94935/7-A	1		12:55	X
IC 440-94935/8-A	1		12:57	X
IC 440-94935/9-A	1		12:59	X
IC 440-94935/10-A	1		13:02	X
IC 440-94935/11-A	1		13:04	X
ICV 440-94935/1-A	1		13:07	X
ICB 440-94935/2-A	1		13:09	X
CRA 440-94935/5-A	1		13:12	X
CCV 440-94935/3-A			13:29	
CCB 440-94935/4-A			13:32	
CCV 440-94935/3-A			13:48	
CCB 440-94935/4-A			13:51	
CCV 440-94935/3-A			14:18	
CCB 440-94935/4-A			14:20	
CCV 440-94935/3-A			15:01	
CCB 440-94935/4-A			15:04	
CCV 440-94935/3-A	1		15:25	X
CCB 440-94935/4-A	1		15:28	X
ZZZZZZ			15:30	
ZZZZZZ			15:33	
240-22082-1	1	T	15:35	X
240-22082-4	1	T	15:38	X
240-22082-7	1	T	15:40	X
240-22082-8	1	T	15:43	X
240-22082-9	1	T	15:45	X
ZZZZZZ			15:47	
ZZZZZZ			15:50	
CCV 440-94935/3-A	1		15:52	X
CCB 440-94935/4-A	1		15:55	X
ZZZZZZ			15:57	
ZZZZZZ			16:00	
ZZZZZZ			16:02	
ZZZZZZ			16:05	
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:14	
ZZZZZZ			16:17	
CCV 440-94935/3-A			16:19	
CCB 440-94935/4-A			16:22	
ZZZZZZ			16:24	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 18:02

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			16:27	
ZZZZZZ			16:29	
ZZZZZZ			16:32	
ZZZZZZ			16:34	
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:41	
CCV 440-94935/3-A			16:44	
CCB 440-94935/4-A			16:46	
ZZZZZZ			16:49	
ZZZZZZ			16:51	
ZZZZZZ			16:54	
ZZZZZZ			16:56	
ZZZZZZ			16:59	
ZZZZZZ			17:01	
ZZZZZZ			17:04	
ZZZZZZ			17:06	
ZZZZZZ			17:08	
CCV 440-94935/3-A			17:11	
CCB 440-94935/4-A			17:13	
ZZZZZZ			17:16	
ZZZZZZ			17:18	
ZZZZZZ			17:21	
ZZZZZZ			17:23	
ZZZZZZ			17:26	
ZZZZZZ			17:28	
ZZZZZZ			17:30	
ZZZZZZ			17:33	
CCV 440-94935/3-A			17:35	
CCB 440-94935/4-A			17:38	
ZZZZZZ			17:40	
ZZZZZZ			17:43	
ZZZZZZ			17:45	
ZZZZZZ			17:48	
ZZZZZZ			17:50	
ZZZZZZ			17:52	
ZZZZZZ			17:55	
CCV 440-94935/3-A			17:57	
CCB 440-94935/4-A			18:00	
CRA 440-94935/5-A	1		18:02	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 18:02

Lab Sample Id	D/F	Type	Time	Analytes
				Hg

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

ICV Source: ME 1PPM HG2_00072 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00074

Analyte	ICV 440-94935/1-A 03/29/2013 13:07				CCV 440-94935/3-A 03/29/2013 15:25				CCV 440-94935/3-A 03/29/2013 15:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.15		8.00	102	4.16		4.00	104	4.16		4.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-94935/2-A 03/29/2013 13:09		CCB 440-94935/4-A 03/29/2013 15:28		CCB 440-94935/4-A 03/29/2013 15:55			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-95355/1-A	04/01/2013 09:21	95355		50	50
LCS 440-95355/2-A	04/01/2013 09:21	95355		50	50
240-22082-4	04/01/2013 09:21	95355		50	50
240-22082-4 MS	04/01/2013 09:21	95355		50	50
240-22082-4 MSD	04/01/2013 09:21	95355		50	50
240-22082-1	04/01/2013 09:21	95355		50	50
240-22082-2	04/01/2013 09:21	95355		50	50
240-22082-7	04/01/2013 09:21	95355		50	50
240-22082-8	04/01/2013 09:21	95355		50	50
240-22082-9	04/01/2013 09:21	95355		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-95355/1-A

Instrument Code: ICPMS5 Batch No.: 95470

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.940	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW33A-031513 MS | Lab ID: 240-22082-4 MS

Lab Name: TestAmerica Irvine | Job No.: 240-22082-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.9		2.0	U	80.0	100	75-125		6020
Arsenic	77.9		5.0	U	80.0	97	75-125		6020
Beryllium	83.1		8.5		80.0	93	75-125		6020
Cadmium	78.0		0.47	J	80.0	97	75-125		6020
Barium	123		43		80.0	100	75-125		6020
Chromium	79.4		1.3	J	80.0	98	75-125		6020
Copper	87.3		9.1		80.0	98	75-125		6020
Nickel	138		57		80.0	101	75-125		6020
Lead	81.1		0.37	J	80.0	101	75-125		6020
Selenium	76.6		5.0	U	80.0	96	75-125		6020
Cobalt	153		74		80.0	99	75-125		6020
Silver	80.8		1.0	U	80.0	101	75-125		6020
Thallium	83.5		2.0	U	80.0	104	75-125		6020
Zinc	226		160		80.0	83	75-125		6020
Molybdenum	74.1		0.29	J	80.0	92	75-125		6020
Vanadium	79.4		0.80	J	80.0	98	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW33A-031513 MSD | Lab ID: 240-22082-4 MSD

Lab Name: TestAmerica Irvine | Job No.: 240-22082-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	78.9		80.0	99	75-125	1	20		6020
Arsenic	76.8		80.0	96	75-125	1	20		6020
Beryllium	80.6		80.0	90	75-125	3	20		6020
Cadmium	76.4		80.0	95	75-125	2	20		6020
Barium	122		80.0	99	75-125	1	20		6020
Chromium	76.9		80.0	95	75-125	3	20		6020
Copper	84.5		80.0	94	75-125	3	20		6020
Nickel	136		80.0	98	75-125	1	20		6020
Lead	79.0		80.0	98	75-125	3	20		6020
Selenium	74.5		80.0	93	75-125	3	20		6020
Cobalt	152		80.0	97	75-125	1	20		6020
Silver	78.7		80.0	98	75-125	3	20		6020
Thallium	80.7		80.0	101	75-125	3	20		6020
Zinc	223		80.0	80	75-125	1	20		6020
Molybdenum	72.9		80.0	91	75-125	2	20		6020
Vanadium	77.5		80.0	96	75-125	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW33A-031513 PDS | Lab ID: 240-22082-4 PDS

Lab Name: TestAmerica Irvine | Job No.: 240-22082-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	77.1		2.0	U	80.0	96	75-125		6020
Arsenic	76.2		5.0	U	80.0	95	75-125		6020
Beryllium	80.4		8.5		80.0	90	75-125		6020
Cadmium	75.1		0.47	J	80.0	93	75-125		6020
Barium	120		43		80.0	97	75-125		6020
Chromium	76.6		1.3	J	80.0	94	75-125		6020
Copper	83.6		9.1		80.0	93	75-125		6020
Nickel	135		57		80.0	97	75-125		6020
Lead	77.9		0.37	J	80.0	97	75-125		6020
Selenium	73.6		5.0	U	80.0	92	75-125		6020
Cobalt	150		74		80.0	95	75-125		6020
Silver	76.9		1.0	U	80.0	96	75-125		6020
Thallium	81.0		2.0	U	80.0	101	75-125		6020
Zinc	222		160		80.0	79	75-125		6020
Molybdenum	72.2		0.29	J	80.0	90	75-125		6020
Vanadium	76.7		0.80	J	80.0	95	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-95355/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22082-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00015

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	78.5		98	80	120		6020
Arsenic	80.0	77.5		97	80	120		6020
Beryllium	80.0	74.4		93	80	120		6020
Cadmium	80.0	76.5		96	80	120		6020
Barium	80.0	79.1		99	80	120		6020
Chromium	80.0	78.2		98	80	120		6020
Copper	80.0	77.9		97	80	120		6020
Nickel	80.0	77.3		97	80	120		6020
Lead	80.0	81.3		102	80	120		6020
Selenium	80.0	77.7		97	80	120		6020
Cobalt	80.0	80.0		100	80	120		6020
Silver	80.0	80.8		101	80	120		6020
Thallium	80.0	82.9		104	80	120		6020
Zinc	80.0	69.2		87	80	120		6020
Molybdenum	80.0	73.6		92	80	120		6020
Vanadium	80.0	77.6		97	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22082-9

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22082-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	1.9	J	1.98	J	NC		6020
Arsenic	1.4	J	25	U	NC		6020
Beryllium	0.11	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	150		154		0.56		6020
Chromium	11		10.8		NC		6020
Copper	6.7		6.78	J	NC		6020
Nickel	21		22.5		NC		6020
Lead	0.40	J	5.0	U	NC		6020
Selenium	0.76	J	25	U	NC		6020
Cobalt	11		11.8		6.4		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	6.9	J	100	U	NC		6020
Molybdenum	10		10.4	J	1.0		6020
Vanadium	7.8	J	8.06	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **APRIL 10, 2013**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / PCB / 1,4-DIOXANE**
LOCKHEED - MRC
SAMPLE DELIVERY GROUP (SDG) 240-22125-1

SAMPLES: 5 / Aqueous / VOC

MRC-MW76A-031813	MRC-MW76B-031813	MRC-MW78B-031813
MRC-MW87A-031813	TB-031813	

4 / Aqueous / PCB

MRC-MW43A-031813	MRC-MW44A-031813	MRC-MW62A-031813
MRC-MW62C-031813		

1 / Aqueous / 1,4-Dioxane

MRC-MW44A-031813

Overview

The sample set for Lockheed - MSA, SDG 240-22125-1, consisted of nine (9) aqueous samples including one (1) aqueous trip blank sample. Five (5) of the samples were analyzed for volatile organic compounds (VOC) as listed above. Four (4) aqueous samples were analyzed for polychlorinated biphenyls (PCB) as listed above. One (1) of the samples was also analyzed for the semi-volatile organic compound (SVOC) 1,4-dioxane as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on March 18, 2013 and analyzed by TestAmerica Laboratories, Inc., Canton for all analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260B for VOCs, 8270D for SVOCs, and 8082 for PCBs, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for tert-butyl alcohol on instrument A3UX16 on 02/07/13. The continuing calibration verification (CCV) RRF for tert-butyl alcohol was also less than the 0.05 criteria for instrument A3UX16 on 03/26/13 @ 13:27.
  Affected Samples: All samples
  Action: The sample non-detected results for tert-butyl alcohol were qualified rejected, (UR). The sample positive tert-butyl alcohol result was qualified estimated, (J).

Minor Problems

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% and greater than the 50% quality control limit for dichlorodifluoromethane, trichlorofluoromethane, 1,1,2-trichlorotrifluoroethane, and hexachlorobutadiene for instrument A3UX16 on 03/26/13 @ 13:27.
  Affected Samples: All samples
  Action: The sample non-detected results for the aforementioned analytes were qualified estimated, (UJ).

- The following laboratory VOC contaminants were detected in the method blank at the following maximum concentrations affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Hexachlorobutadiene [1]	0.327	1.635
Methylene chloride [1]	1.46	14.6
Acetone [2]	1.5	15.0
Toluene [2]	0.13	0.65

  [1] Method blank MB 240-79501 affecting all samples.
  [2] Trip blank sample TB-031813 affecting all samples.

  An action level of ten times the maximum level for methylene chloride and five times the maximum level for hexachlorobutadiene has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample MRC-MW78B-031813 and MRC-MW87A-031813 acetone results were qualified (B) for blank contamination.

- Sample MRC-MW76A-031813 had a positive VOC result for cyclohexane reported as a TIC. The sample positive VOC TIC result was qualified as estimated, (NJ), presumptively present, as a TIC analyte.

- Samples MRC-MW76B-031813 and MRC-MW78B-031813 had positive VOC results for the analyte trimethyl silanol reported as a TIC. The analyte is considered present due to column bleed. The sample positive VOC TIC results were qualified as presumptively present, (NJ), due to column bleed.

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

Notes

The VOC CCV %Ds were greater than the 20% and less than the 50% quality control limit for 1,2,4-trichlorobenzene, naphthalene, 1,2,3-trichlorobenzene, and tert-amyl-methyl ether for instrument A3UX16 on 03/26/13 @ 13:27.
Affected Samples: All samples
Action: The sample results for the aforementioned analytes were non-detected and were not qualified.

The VOC laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for dichlorodifluoromethane and trichlorofluoromethane for LCS 240-79501.

Affected Samples: All samples

Action: The sample results for the aforementioned analytes were non-detected and were not qualified.

The surrogate tetrachloro-m-xylene (TCX) %R was greater than the quality control limit for the Aroclor analysis for sample MRC-MW43A-031813.

Affected Sample: MRC-MW43A-031813

Action: No validation action was taken as the sample had non-detected Aroclor results.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol sample results for all samples were rejected due to calibration and CCV RRF criteria non-compliances. VOC sample results were qualified for method blank contamination and CCV %D non-compliances.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260B, 8270D, 8082, and 8015C, and the Region III EPA Functional Guidelines for Organic Data Validation (9/94).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW76A-031813			MRC-MW76B-031813			MRC-MW78B-031813			MRC-MW87A-031813		
SDG: 240-22125-1	LAB_ID	240-22125-5			240-22125-6			240-22125-7			240-22125-8		
FRACTION: OV	SAMP_DATE	3/18/2013			3/18/2013			3/18/2013			3/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	UJ	C	0.28	UJ	C	0.28	UJ	C	0.28	UJ	C
1,1-DICHLOROETHANE		0.15	U		1.9			0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		1.3			0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U		1.3	B	B	1.9	B	B
BENZENE		0.13	U		0.17	J	P	0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.41	U	

PROJ_NO: 04795	NSAMPLE	TB-031813
SDG: 240-22125-1	LAB_ID	240-22125-9
FRACTION: OV	SAMP_DATE	3/18/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	UJ	C
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U	
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.5	J	P
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW76A-031813			MRC-MW76B-031813			MRC-MW78B-031813			MRC-MW87A-031813		
SDG: 240-22125-1	LAB_ID	240-22125-5			240-22125-6			240-22125-7			240-22125-8		
FRACTION: OV	SAMP_DATE	3/18/2013			3/18/2013			3/18/2013			3/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.16	J	P
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		2			0.65	J	P	0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
CYCLOHEXANE		0.34	NJ	Z1									
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	0.31	UJ	C	0.31	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		2	J	P
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	UJ	C	0.3	UJ	C	0.3	UJ	C	0.3	UJ	C
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
SILANOL, TRIMETHYL-					1.4	NJ	Z2	1.1	NJ	Z2			
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	4.5	J	CP
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	TB-031813
SDG: 240-22125-1	LAB_ID	240-22125-9
FRACTION: OV	SAMP_DATE	3/18/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON DISULFIDE	0.13	U	
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
CYCLOHEXANE			
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	UJ	C
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	UJ	C
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	U	
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
SILANOL, TRIMETHYL-			
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	J	P
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW76A-031813			MRC-MW76B-031813			MRC-MW78B-031813			MRC-MW87A-031813		
SDG: 240-22125-1	LAB_ID	240-22125-5			240-22125-6			240-22125-7			240-22125-8		
FRACTION: OV	SAMP_DATE	3/18/2013			3/18/2013			3/18/2013			3/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		0.24	J	P	19			13			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	UJ	C	0.21	UJ	C	0.21	UJ	C
VINYL ACETATE		0.19	U		0.19	U		0.19	U		0.19	U	
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	TB-031813		
SDG: 240-22125-1	LAB_ID	240-22125-9		
FRACTION: OV	SAMP_DATE	3/18/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRICHLOROETHENE		0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C
VINYL ACETATE		0.19	U	
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW44A-031813		
SDG: 240-22125-1	LAB_ID	240-22125-4		
FRACTION: OS	SAMP_DATE	3/18/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,4-DIOXANE		2.4		

PROJ_NO: 04795	NSAMPLE	MRC-MW43A-031813			MRC-MW44A-031813			MRC-MW62A-031813			MRC-MW62C-031813		
SDG: 240-22125-1	LAB_ID	240-22125-3			240-22125-4			240-22125-1			240-22125-2		
FRACTION: PCB	SAMP_DATE	3/18/2013			3/18/2013			3/18/2013			3/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.17	U		0.16	U		0.16	U		0.17	U	
AROCLOR-1221		0.13	U		0.12	U		0.13	U		0.13	U	
AROCLOR-1232		0.16	U		0.15	U		0.15	U		0.16	U	
AROCLOR-1242		0.22	U		0.21	U		0.21	U		0.22	U	
AROCLOR-1248		0.098	U		0.095	U		0.096	U		0.098	U	
AROCLOR-1254		0.16	U		0.15	U		0.15	U		0.16	U	
AROCLOR-1260		0.17	U		0.16	U		0.16	U		0.17	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76A-031813 Lab Sample ID: 240-22125-5

Matrix: Water Lab File ID: UXM7028.D

Analysis Method: 8260B Date Collected: 03/18/2013 10:50

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76A-031813 | Lab Sample ID: 240-22125-5

Matrix: Water | Lab File ID: UXM7028.D

Analysis Method: 8260B | Date Collected: 03/18/2013 10:50

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 15:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.24	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76A-031813 Lab Sample ID: 240-22125-5

Matrix: Water Lab File ID: UXM7028.D

Analysis Method: 8260B Date Collected: 03/18/2013 10:50

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
2037-26-5	Toluene-d8 (Surr)	82		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76A-031813 Lab Sample ID: 240-22125-5

Matrix: Water Lab File ID: UXM7028.D

Analysis Method: 8260B Date Collected: 03/18/2013 10:50

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.34

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
110-82-7	Cyclohexane	5.23	0.34	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76B-031813 | Lab Sample ID: 240-22125-6

Matrix: Water | Lab File ID: UXM7029.D

Analysis Method: 8260B | Date Collected: 03/18/2013 12:17

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 16:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.17	J	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	2.0		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.9		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.3		1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76B-031813 Lab Sample ID: 240-22125-6

Matrix: Water Lab File ID: UXM7029.D

Analysis Method: 8260B Date Collected: 03/18/2013 12:17

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	19		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76B-031813 | Lab Sample ID: 240-22125-6

Matrix: Water | Lab File ID: UXM7029.D

Analysis Method: 8260B | Date Collected: 03/18/2013 12:17

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 16:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76B-031813 Lab Sample ID: 240-22125-6

Matrix: Water Lab File ID: UXM7029.D

Analysis Method: 8260B Date Collected: 03/18/2013 12:17

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW78B-031813 Lab Sample ID: 240-22125-7

Matrix: Water Lab File ID: UXM7030.D

Analysis Method: 8260B Date Collected: 03/18/2013 15:10

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.3	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.65	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW78B-031813 | Lab Sample ID: 240-22125-7

Matrix: Water | Lab File ID: UXM7030.D

Analysis Method: 8260B | Date Collected: 03/18/2013 15:10

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 16:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	13		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW78B-031813 Lab Sample ID: 240-22125-7

Matrix: Water Lab File ID: UXM7030.D

Analysis Method: 8260B Date Collected: 03/18/2013 15:10

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW78B-031813 Lab Sample ID: 240-22125-7

Matrix: Water Lab File ID: UXM7030.D

Analysis Method: 8260B Date Collected: 03/18/2013 15:10

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW87A-031813 Lab Sample ID: 240-22125-8

Matrix: Water Lab File ID: UXM7027.D

Analysis Method: 8260B Date Collected: 03/18/2013 16:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.9	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	0.16	J	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	2.0	J	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW87A-031813 Lab Sample ID: 240-22125-8

Matrix: Water Lab File ID: UXM7027.D

Analysis Method: 8260B Date Collected: 03/18/2013 16:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	4.5	J	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW87A-031813 Lab Sample ID: 240-22125-8

Matrix: Water Lab File ID: UXM7027.D

Analysis Method: 8260B Date Collected: 03/18/2013 16:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW87A-031813 Lab Sample ID: 240-22125-8

Matrix: Water Lab File ID: UXM7027.D

Analysis Method: 8260B Date Collected: 03/18/2013 16:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 15:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: TB-031813 Lab Sample ID: 240-22125-9

Matrix: Water Lab File ID: UXM7031.D

Analysis Method: 8260B Date Collected: 03/18/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.5	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U *	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: TB-031813 Lab Sample ID: 240-22125-9

Matrix: Water Lab File ID: UXM7031.D

Analysis Method: 8260B Date Collected: 03/18/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	0.13	J	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: TB-031813 Lab Sample ID: 240-22125-9

Matrix: Water Lab File ID: UXM7031.D

Analysis Method: 8260B Date Collected: 03/18/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	84		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: TB-031813 Lab Sample ID: 240-22125-9

Matrix: Water Lab File ID: UXM7031.D

Analysis Method: 8260B Date Collected: 03/18/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 16:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW44A-031813 | Lab Sample ID: 240-22125-4

Matrix: Water | Lab File ID: 0326022.D

Analysis Method: 8270D | Date Collected: 03/18/2013 14:50

Extract. Method: 3520C | Date Extracted: 03/21/2013 09:26

Sample wt/vol: 1000(mL) | Date Analyzed: 03/26/2013 23:19

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79522 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	2.4		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		20-110
367-12-4	2-Fluorophenol (Surr)	53		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	54		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	63		21-110
4165-62-2	Phenol-d5 (Surr)	52		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW43A-031813 Lab Sample ID: 240-22125-3

Matrix: Water Lab File ID: P1200006.D

Analysis Method: 8082 Date Collected: 03/18/2013 13:30

Extraction Method: 3520C Date Extracted: 03/22/2013 10:34

Sample wt/vol: 1020(mL) Date Analyzed: 03/27/2013 12:00

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: CLP-2 ID: 0.53(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 79626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	0.98	U	0.98	0.17
11104-28-2	Aroclor 1221	0.98	U	0.98	0.13
11141-16-5	Aroclor 1232	0.98	U	0.98	0.16
53469-21-9	Aroclor 1242	0.98	U	0.98	0.22
12672-29-6	Aroclor 1248	0.98	U	0.98	0.098
11097-69-1	Aroclor 1254	0.98	U	0.98	0.16
11096-82-5	Aroclor 1260	0.98	U	0.98	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	195	X	23-136
2051-24-3	DCB Decachlorobiphenyl	50		10-130

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW44A-031813 | Lab Sample ID: 240-22125-4

Matrix: Water | Lab File ID: P1200007.D

Analysis Method: 8082 | Date Collected: 03/18/2013 14:50

Extraction Method: 3520C | Date Extracted: 03/22/2013 10:34

Sample wt/vol: 1050(mL) | Date Analyzed: 03/27/2013 12:14

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79626 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	0.95	U	0.95	0.16
11104-28-2	Aroclor 1221	0.95	U	0.95	0.12
11141-16-5	Aroclor 1232	0.95	U	0.95	0.15
53469-21-9	Aroclor 1242	0.95	U	0.95	0.21
12672-29-6	Aroclor 1248	0.95	U	0.95	0.095
11097-69-1	Aroclor 1254	0.95	U	0.95	0.15
11096-82-5	Aroclor 1260	0.95	U	0.95	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	75		23-136
2051-24-3	DCB Decachlorobiphenyl	17		10-130

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW62A-031813 | Lab Sample ID: 240-22125-1

Matrix: Water | Lab File ID: P1200004.D

Analysis Method: 8082 | Date Collected: 03/18/2013 10:40

Extraction Method: 3520C | Date Extracted: 03/22/2013 10:34

Sample wt/vol: 1040(mL) | Date Analyzed: 03/27/2013 11:31

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79626 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	0.96	U	0.96	0.16
11104-28-2	Aroclor 1221	0.96	U	0.96	0.13
11141-16-5	Aroclor 1232	0.96	U	0.96	0.15
53469-21-9	Aroclor 1242	0.96	U	0.96	0.21
12672-29-6	Aroclor 1248	0.96	U	0.96	0.096
11097-69-1	Aroclor 1254	0.96	U	0.96	0.15
11096-82-5	Aroclor 1260	0.96	U	0.96	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	67		23-136
2051-24-3	DCB Decachlorobiphenyl	42		10-130

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW62C-031813 | Lab Sample ID: 240-22125-2

Matrix: Water | Lab File ID: P1200005.D

Analysis Method: 8082 | Date Collected: 03/18/2013 12:00

Extraction Method: 3520C | Date Extracted: 03/22/2013 10:34

Sample wt/vol: 1020(mL) | Date Analyzed: 03/27/2013 11:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79626 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	0.98	U	0.98	0.17
11104-28-2	Aroclor 1221	0.98	U	0.98	0.13
11141-16-5	Aroclor 1232	0.98	U	0.98	0.16
53469-21-9	Aroclor 1242	0.98	U	0.98	0.22
12672-29-6	Aroclor 1248	0.98	U	0.98	0.098
11097-69-1	Aroclor 1254	0.98	U	0.98	0.16
11096-82-5	Aroclor 1260	0.98	U	0.98	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	74		23-136
2051-24-3	DCB Decachlorobiphenyl	34		10-130

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: Tetra Tech	Client Project Manager: Tony Aparavage	Site Contact: Stv Cameron	Lab Contact:
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:
City/State/Zip: Germantown MD 20874	Email: Tony.Aparavage@tetratech.com	Analysis Turnaround Time (calendar days)	Analyses
Phone: (301) 528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	
Project Name: MRC Gw Sampling	Method of Shipment/Carrier:		
Project Number: 12IC04795-02	Shipping/Tracking No:		
PO#			

COC No: 009426

1 of 1 COCs

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Total Metals	PCBs	1,4-Dioxane	VOCs	Sample Specific Notes / Special Instructions:
MRC-MW62A-031813	3/18/13	1040		X					1				2		N	G	X	X			
MRC-MW62C-031813		1200		X					1				2		N	G	X	X			
MRC-MW43A-031813		1330		X									2		N	G		X			Emits Odor
MRC-MW44A-031813		1450		X									4		N	G		X	X		
MRC-MW76A-031813		1050		X					1	3					N	G	X			X	
MRC-MW76B-031813		1217		X					1	3					N	G	X			X	
MRC-MW78B-031813		1510		X					1	3					N	G	X			X	
MRC-MW87A-031813	↓	1600		X						3					N	G				X	
TB-031813	—	—		X						2					N	G				X	

240-22125 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 mon
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3-18-13/1610		TestAmerica	3-18-2013/1610
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	3-18-2013/1655			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			Debra D. Green	TA	3-19-13 945

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TAL 0018- 1 (04/10)

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22125

Client Tetra Tech Site Name _____ By: Mark D. Steen

Cooler Received on 3-19-13 Opened on 3-19-13 (Signature)

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt 3-19-13 3-19-13

IR GUN# 1 (CF –2 °C) Observed Sample Temp. 2.6 °C Corrected Sample Temp. 2.0 °C

IR GUN# 4G (CF 0 °C) Observed Sample Temp. 1.8 °C Corrected Sample Temp. 1.8 °C ☑ Multiple on Back

IR GUN# 5G (CF 0 °C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

IR GUN# 8 (CF 0 °C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
62A	<2	3-14-13	DDG
62C	<2	"	"
76A	<2	"	"
76B	<2	"	"
78B	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client Cooler	1.8	1.8	4Ga	Ice
1	2.0	2.0	1	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22125-1

Login Number: 22125
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/22/13 03:30 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
OS	UG/L	MRC-MW44A-031813	240-22125-4	NM	3/18/2013	3/21/2013	3/26/2013	3	5	8
OV	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	TB-031813	240-22125-9	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	TB-031513	240-22082-5	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW87A-031813	240-22125-8	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW34A-031513	240-22082-6	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW32A-031513	240-22082-3	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
PCB	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW43A-031813	240-22125-3	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW44A-031813	240-22125-4	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling

Report Number: 240-22125-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Total Recoverable Metals and the 7470A Total Mercury analyses were performed at the TestAmerica Irvine laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 03/19/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.8 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW76A-031813 (240-22125-5), MRC-MW76B-031813 (240-22125-6), MRC-MW78B-031813 (240-22125-7), MRC-MW87A-031813 (240-22125-8) and TB-031813 (240-22125-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/26/2013.

Methylene Chloride was detected in method blank MB 240-79501/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Hexachlorobutadiene was detected in method blank MB 240-79501/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample(LCS) for batch 79501 exceeded control limits for the following analyte(s): Dichlorodifluoromethane and Trichlorofluoromethane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample MRC-MW44A-031813 (240-22125-4) was analyzed for semivolatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/21/2013 and analyzed on 03/26/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2), MRC-MW43A-031813 (240-22125-3) and

MRC-MW44A-031813 (240-22125-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 03/22/2013 and analyzed on 03/27/2013.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Tetrachloro-m-xylene failed the surrogate recovery criteria high for MRC-MW43A-031813 (240-22125-3).

The closing continuing calibration verification (CCV) associated with these samples passed average. Since the samples were ND, no corrective action is required. MRC-MW43A-031813 (240-22125-3), MRC-MW44A-031813 (240-22125-4), MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2)

Two surrogates are used for this analysis. The laboratory's SOP allows 1 of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: MRC-MW43A-031813 (240-22125-3). These results have been reported and qualified.

The following sample required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: (CCV 240-79626/3).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 79140.

No other difficulties were encountered during the PCBs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2), MRC-MW76A-031813 (240-22125-5), MRC-MW76B-031813 (240-22125-6) and MRC-MW78B-031813 (240-22125-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/01/2013 and analyzed on 04/02/2013.

Copper and Molybdenum were detected in method blank MB 440-95414/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2), MRC-MW76A-031813 (240-22125-5), MRC-MW76B-031813 (240-22125-6) and MRC-MW78B-031813 (240-22125-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 03/29/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Tetra Tech, Inc
Project/Site: MRC GW Sampling

TestAmerica Job ID: 240-22125-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: BFB3402.D BFB Injection Date: 11/27/2012

Instrument ID: A3UX16 BFB Injection Time: 15:03

Analysis Batch No.: 66473

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.5	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.3)1
176	95.0 - 101.0 % of mass 174	71.2	(95.1)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-66473/8	UXM9089.D	11/27/2012	17:59
	STD2 240-66473/9	UXM9090.D	11/27/2012	18:22
	STD3 240-66473/10	UXM9091.D	11/27/2012	18:44
	STD4 240-66473/11	UXM9092.D	11/27/2012	19:07
	STD5 240-66473/12	UXM9093.D	11/27/2012	19:30
	STD6 240-66473/13	UXM9094.D	11/27/2012	19:53

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6395 0.5790	0.5949	0.6191	0.5701	0.5598	Ave		0.5937				5.1		15.0			
Ethyl ether	0.2957 0.2913	0.2805	0.3162	0.2908	0.2785	Ave		0.2922				4.6		15.0			
3-Chloro-1-propene	0.1657 0.1816	0.1589	0.1747	0.1684	0.1734	Ave		0.1704				4.6		15.0			
Diisopropyl ether	0.2885 0.3072	0.2714	0.3042	0.2883	0.2921	Ave		0.2920				4.4		15.0			
2-Chloro-1,3-butadiene	0.5541 0.6319	0.5394	0.6027	0.5733	0.5814	Ave		0.5805				5.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.9712 1.0865	0.9515	1.0602	1.0211	1.0411	Ave		1.0219				5.1		15.0			
~~Propionitrile~~	0.0336 0.0410	0.0390	0.0380	0.0379	0.0392	Ave		~~0.0381~~				6.4		15.0			
Ethyl acetate	0.2415 0.2708	0.2384	0.2467	0.2536	0.2545	Ave		0.2509				4.6		15.0			
Methacrylonitrile	0.2017 0.1992	0.1750	0.1941	0.1858	0.1896	Ave		0.1909				5.1		15.0			
~~Isobutyl alcohol~~	0.0071 0.0081	0.0070	0.0072	0.0075	0.0077	Ave		~~0.0074~~				5.5		15.0			
Tert-amyl-methyl ether (TAME)	0.7918 0.9098	0.8105	0.8835	0.8488	0.8716	Ave		0.8526				5.3		15.0			
n-Heptane	0.0550 0.0612	0.0566	0.0534	0.0500	0.0453	Ave		0.0536				10.0		15.0			
~~n-Butanol~~	0.0039 0.0055	0.0047	0.0054	0.0053	0.0055	Ave		~~0.0051~~				13.0		15.0			
Methyl methacrylate	0.2010 0.2422	0.1999	0.2231	0.2243	0.2270	Ave		0.2196				7.4		15.0			
~~2-Nitropropane~~	0.0355 +++++	0.0470	0.0403	0.0428	0.0485	Ave		~~0.0428~~				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0937 0.0872	0.0965	0.1030	0.0923	0.0852	Ave		0.0930				6.9		15.0			
1,2,3-Trimethylbenzene	2.4010 2.9673	2.3401	2.6960	2.6868	2.7750	Ave		2.6444				8.9		15.0			
2-Methylnaphthalene	0.8663 +++++	1.0537	1.0510	0.9969	0.7520	Ave		0.9440				14.0		15.0			
n-Butyl acetate	0.3213 0.3680	0.3124	0.3343	0.3499	0.3540	Ave		0.3400				6.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2922	0.3425		2.00	0.0100	17.2	50.0
Diisopropyl ether	Ave	0.2920	0.2760		10.0	0.0100	-5.5	50.0
Isobutyl alcohol	Ave	0.0074	0.0093		50.0	0.500	25.3	50.0
Cyclohexanone	Ave	0.0930	0.0304		20.0	0.200	-67.3*	50.0
1,2,3-Trimethylbenzene	Ave	2.644	2.994		0.0113	0.0100	13.2	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: BFB297.D BFB Injection Date: 02/07/2013

Instrument ID: A3UX16 BFB Injection Time: 12:56

Analysis Batch No.: 74618

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.9	
75	30.0 - 60.0 % of mass 95	56.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	51.6	
175	5.0 - 9.0 % of mass 174	3.4	(6.5)1
176	95.0 - 101.0 % of mass 174	50.1	(97.1)1
177	5.0 - 9.0 % of mass 176	3.4	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-74618/2	UXM6218.D	02/07/2013	13:27
	STD8260 240-74618/3	UXM6219.D	02/07/2013	13:50
	STD8260 240-74618/4	UXM6220.D	02/07/2013	14:12
	STD8260 240-74618/5	UXM6221.D	02/07/2013	14:35
	STD8260 240-74618/6	UXM6222.D	02/07/2013	14:58
	STD8260 240-74618/7	UXM6223.D	02/07/2013	15:20
	ICV 240-74618/8	UXM6224.D	02/07/2013	15:43

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74618/7	UXM6223.D
Level 2	STD8260 240-74618/6	UXM6222.D
Level 3	STD8260 240-74618/5	UXM6221.D
Level 4	STD8260 240-74618/4	UXM6220.D
Level 5	STD8260 240-74618/3	UXM6219.D
Level 6	STD8260 240-74618/2	UXM6218.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1655 0.2139	0.1950	0.2117	0.2250	0.1770	Ave		0.1980				12.0		15.0			
Chloromethane	0.5058 0.4534	0.4913	0.4685	0.4467	0.4652	Ave		0.4718			0.1000	4.8		15.0			
Vinyl chloride	0.4479 0.4349	0.4543	0.4578	0.4328	0.4507	Ave		0.4464				2.3		15.0			
Bromomethane	0.1647 0.1134	0.1618	0.1243	0.1362	0.1072	Lin1	0.0733	0.1117							0.9930		0.9900
Chloroethane	0.3008 0.2699	0.2633	0.2651	0.2622	0.2584	Ave		0.2699				5.8		15.0			
Trichlorofluoromethane	0.1945 0.1767	0.1777	0.1872	0.1834	0.1598	Ave		0.1799				6.6		15.0			
Acrolein	0.0621 0.0714	0.0629	0.0667	0.0657	0.0611	Ave		0.0650				5.9		15.0			
1,1-Dichloroethene	0.2925 0.3178	0.2976	0.2885	0.2944	0.2961	Ave		0.2978				3.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1277 0.1255	0.1102	0.1219	0.1299	0.1021	Ave		0.1196				9.2		15.0			
Acetone	0.1631 0.1304	0.1249	0.1382	0.1245	0.1110	Ave		0.1320				13.0		15.0			
Iodomethane	0.3203 0.3505	0.3484	0.3203	0.3182	0.3277	Ave		0.3309				4.5		15.0			
Carbon disulfide	0.9006 1.1662	0.9102	0.9141	0.9835	1.0269	Ave		0.9836				10.0		15.0			
~~Acetonitrile~~	0.0501 0.0501	0.0368	0.0476	0.0422	0.0348	Ave		~~0.0436~~				15.0		15.0			
Methyl acetate	0.3200 0.3183	0.3023	0.3159	0.3003	0.2851	Ave		0.3070				4.4		15.0			
Methylene Chloride	0.4848 0.3837	0.4381	0.3679	0.3537	0.3640	Ave		0.3987				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0199 0.0200	0.0154	0.0200	0.0182	0.0142	Ave		0.0180				14.0		15.0			
Acrylonitrile	0.1454 0.1558	0.1411	0.1518	0.1445	0.1383	Ave		0.1462				4.5		15.0			
Methyl tert-butyl ether	0.9103 1.0586	0.9378	0.9098	0.9208	0.9452	Ave		0.9471				6.0		15.0			
trans-1,2-Dichloroethene	0.3352 0.3614	0.3383	0.3201	0.3225	0.3390	Ave		0.3361				4.4		15.0			
Hexane	0.0729 0.0745	0.0604	0.0768	0.0775	0.0594	Ave		0.0703				12.0		15.0			
1,1-Dichloroethane	0.7047 0.7867	0.7510	0.6985	0.6925	0.7265	Ave		0.7266			0.1000	5.0		15.0			
Vinyl acetate	0.0486 0.0680	0.0460	0.0541	0.0579	0.0610	Ave		0.0560				15.0		15.0			
2-Butanone	0.1932 0.1741	0.1465	0.1768	0.1602	0.1554	Ave		0.1677				10.0		15.0			
cis-1,2-Dichloroethene	0.3362 0.3742	0.3651	0.3392	0.3299	0.3496	Ave		0.3490				5.0		15.0			
2,2-Dichloropropane	0.2813 0.3509	0.2981	0.2821	0.3032	0.3241	Ave		0.3066				8.7		15.0			
Bromochloromethane	0.1382 0.1411	0.1314	0.1248	0.1258	0.1302	Ave		0.1319				5.0		15.0			
Tetrahydrofuran	0.2003 0.1123	0.1251	0.1133	0.1091	0.0977	Lin1	0.0706	0.1042							0.9920		0.9900
Chloroform	0.5694 0.6344	0.6062	0.5689	0.5595	0.5889	Ave		0.5879				4.8		15.0			
1,1,1-Trichloroethane	0.3357 0.4198	0.3545	0.3585	0.3720	0.3793	Ave		0.3700				7.8		15.0			
Cyclohexane	0.6018 0.7292	0.5994	0.6741	0.7267	0.6358	Ave		0.6611				8.8		15.0			
1,1-Dichloropropene	0.4526 0.5465	0.4899	0.4801	0.4880	0.4937	Ave		0.4918				6.2		15.0			
Carbon tetrachloride	0.2047 0.2871	0.2145	0.2204	0.2455	0.2522	Ave		0.2374				13.0		15.0			
1,2-Dichloroethane	0.5136 0.5650	0.5326	0.4994	0.4893	0.5154	Ave		0.5192				5.2		15.0			
Benzene	1.5256 1.6847	1.5537	1.4382	1.4263	1.5081	Ave		1.5228				6.2		15.0			
Trichloroethene	0.2530 0.2800	0.2635	0.2536	0.2460	0.2572	Ave		0.2589				4.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4063 0.5136	0.3939	0.4873	0.5164	0.4219	Ave		0.4566				12.0		15.0			
1,2-Dichloropropane	0.3429 0.4213	0.3676	0.3520	0.3598	0.3788	Ave		0.3704				7.5		15.0			
Dibromomethane	0.1600 0.1800	0.1687	0.1666	0.1599	0.1642	Ave		0.1666				4.5		15.0			
[redacted]	0.0022 0.0021	0.0014	0.0024	0.0019	0.0018	Qua	0.0828	[redacted]	0						0.9960		0.9900
Bromodichloromethane	0.2757 0.4230	0.3164	0.3178	0.3358	0.3740	Ave		0.3405				15.0		15.0			
2-Chloroethyl vinyl ether	0.1018 0.1952	0.1176	0.1452	0.1527	0.1656	Lin1	-0.250	0.1854							0.9920		0.9900
cis-1,3-Dichloropropene	0.3128 0.5541	0.3599	0.3850	0.4141	0.4734	Qua	-0.115	0.3937	0.0041						1.0000		0.9900
4-Methyl-2-pentanone	0.2461 0.3546	0.2660	0.3018	0.3036	0.3113	Ave		0.2972				13.0		15.0			
Toluene	2.0335 2.4081	2.1481	2.0452	2.0049	2.1647	Ave		2.1341				7.0		15.0			
trans-1,3-Dichloropropene	0.3834 0.6923	0.4261	0.4661	0.5171	0.5955	Qua	-0.207	0.5016	0.0049						1.0000		0.9900
Ethyl methacrylate	0.3855 0.6573	0.4366	0.5000	0.5368	0.5946	Lin1	-0.374	0.6353							0.9950		0.9900
1,1,2-Trichloroethane	0.3513 0.3794	0.3500	0.3495	0.3401	0.3596	Ave		0.3550				3.8		15.0			
1,3-Dichloropropane	0.7041 0.8219	0.7485	0.7309	0.7176	0.7566	Ave		0.7466				5.6		15.0			
Tetrachloroethene	0.2394 0.2779	0.2485	0.2456	0.2474	0.2555	Ave		0.2524				5.4		15.0			
2-Hexanone	0.2555 0.3273	0.2530	0.2844	0.2914	0.3021	Ave		0.2856				9.9		15.0			
Dibromochloromethane	0.1965 0.3239	0.2072	0.2257	0.2453	0.2777	Qua	-0.067	0.2326	0.0023						1.0000		0.9900
1,2-Dibromoethane	0.2819 0.3505	0.3047	0.3100	0.3178	0.3332	Ave		0.3163				7.5		15.0			
Chlorobenzene	1.0721 1.2059	1.1200	1.0795	1.0433	1.1272	Ave		1.1080			0.3000	5.2		15.0			
1,1,1,2-Tetrachloroethane	0.2433 0.3561	0.2660	0.2702	0.2948	0.3211	Ave		0.2919				14.0		15.0			
Ethylbenzene	0.5250 0.6926	0.5782	0.5894	0.5867	0.6324	Ave		0.6007				9.4		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6327 0.9012	0.7126	0.7222	0.7393	0.8059	Ave		0.7523				12.0		15.0			
o-Xylene	0.6506 0.8703	0.7179	0.7372	0.7408	0.8089	Ave		0.7543				10.0		15.0			
Styrene	0.9693 1.4883	1.0506	1.1070	1.1627	1.3150	Lin1	-0.754	1.4178							0.9920		0.9900
Bromoform	0.0819 0.1516	0.0895	0.0988	0.1100	0.1259	Qua	-0.031	0.1013	0.0013		0.1000				1.0000		0.9900
Isopropylbenzene	1.4947 2.1214	1.6455	1.7370	1.7894	1.9033	Ave		1.7819				12.0		15.0			
1,1,2,2-Tetrachloroethane	0.9920 1.0231	1.0892	1.0509	1.0781	1.0457	Ave		1.0465			0.3000	3.4		15.0			
Bromobenzene	0.6528 0.7862	0.7346	0.7241	0.7347	0.7560	Ave		0.7314				6.1		15.0			
1,2,3-Trichloropropane	0.2749 0.2747	0.2936	0.2771	0.2874	0.2758	Ave		0.2806				2.8		15.0			
trans-1,4-Dichloro-2-butene	0.2602 0.3393	0.2990	0.2853	0.3115	0.3150	Ave		0.3017				9.0		15.0			
n-Propylbenzene	0.6560 0.9449	0.7868	0.8024	0.8571	0.8933	Ave		0.8234				12.0		15.0			
2-Chlorotoluene	0.7071 0.8315	0.7838	0.7649	0.7981	0.8052	Ave		0.7818				5.5		15.0			
1,3,5-Trimethylbenzene	2.2287 3.2654	2.5753	2.7581	2.9169	3.0305	Ave		2.7958				13.0		15.0			
4-Chlorotoluene	0.7086 0.8957	0.8509	0.7967	0.8218	0.8621	Ave		0.8226				7.9		15.0			
tert-Butylbenzene	1.8732 2.6788	2.1545	2.3587	2.4660	2.5571	Ave		2.3480				12.0		15.0			
1,2,4-Trimethylbenzene	2.3218 3.3539	2.7540	2.9061	2.9666	3.1301	Ave		2.9054				12.0		15.0			
sec-Butylbenzene	2.3987 3.5071	2.7725	3.0430	3.1790	3.2957	Ave		3.0327				13.0		15.0			
1,3-Dichlorobenzene	1.3883 1.5034	1.4458	1.4409	1.3903	1.4513	Ave		1.4367				3.0		15.0			
p-Isopropyltoluene	1.8920 2.7941	2.0620	2.3493	2.4668	2.5988	Ave		2.3605				14.0		15.0			
1,4-Dichlorobenzene	1.4766 1.5820	1.5509	1.5101	1.4725	1.5285	Ave		1.5201				2.8		15.0			
n-Butylbenzene	1.9276 2.7241	2.0408	2.2530	2.3479	2.5383	Ave		2.3053				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3922 1.4327	1.4047	1.3988	1.3238	1.4189	Ave		1.3952				2.7		15.0			
1,2-Dibromo-3-Chloropropane	0.0956 0.0865	0.0733	0.0919	0.0855	0.0925	Ave		0.0875				9.1		15.0			
1,3,5-Trichlorobenzene	0.7274 0.6156	0.6578	0.7250	0.6145	0.6672	Ave		0.6679				7.5		15.0			
1,2,4-Trichlorobenzene	0.6586 0.5021	0.5654	0.6525	0.5249	0.5808	Ave		0.5807				11.0		15.0			
Hexachlorobutadiene	0.2419 +++++	0.2174	0.2428	0.2049	0.2005	Ave		0.2215				9.0		15.0			
Naphthalene	1.8396 1.5435	1.5783	2.0618	1.7042	1.8696	Ave		1.7662				11.0		15.0			
1,2,3-Trichlorobenzene	0.5910 +++++	0.4794	0.6204	0.4598	0.4810	Ave		0.5263				14.0		15.0			
Dibromofluoromethane (Surr)	0.2318 0.2635	0.2444	0.2333	0.2312	0.2505	Ave		0.2425				5.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4018 0.4434	0.4134	0.4080	0.3932	0.4073	Ave		0.4112				4.2		15.0			
Toluene-d8 (Surr)	1.4581 1.8629	1.6195	1.6043	1.5883	1.7170	Ave		1.6417				8.3		15.0			
4-Bromofluorobenzene (Surr)	0.5145 0.6364	0.5417	0.5528	0.5472	0.5940	Ave		0.5645				7.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.2524		1.00	0.0100	27.4	50.0
Chloromethane	Ave	0.4718	0.4832	0.1000	1.00	0.0100	2.4	50.0
Vinyl chloride	Ave	0.4464	0.4783		1.00	0.0100	7.1	20.0
Bromomethane	Lin1		0.1130		1.00	0.0100	-5.4	50.0
Chloroethane	Ave	0.2699	0.2696		1.00	0.0100	-0.1	50.0
Trichlorofluoromethane	Ave	0.1799	0.2258		1.00	0.0100	25.5	50.0
Acrolein	Ave	0.0650	0.0737		20.0	0.0300	13.4	50.0
1,1-Dichloroethene	Ave	0.2978	0.2814		1.00	0.0100	-5.5	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1469		1.00	0.0100	22.9	50.0
Acetone	Ave	0.1320	0.1147		10.0	0.0200	-13.1	50.0
Iodomethane	Ave	0.3309	0.3093		1.00	0.0100	-6.5	50.0
Carbon disulfide	Ave	0.9836	0.8873		1.00	0.0100	-9.8	50.0
Acetonitrile	Ave	0.0436	0.0440		20.0	0.0300	1.1	50.0
Methyl acetate	Ave	0.3070	0.2874		10.0	0.0100	-6.4	50.0
Methylene Chloride	Ave	0.3987	0.3316		1.00	0.0100	-16.8	50.0
tert-Butyl alcohol	Ave	0.0180	0.0180		50.0	0.200	0.4	50.0
Acrylonitrile	Ave	0.1462	0.1386		20.0	0.0300	-5.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8619		1.00	0.0100	-9.0	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3069		1.00	0.0100	-8.7	50.0
Hexane	Ave	0.0703	0.0802		1.00	0.0100	14.1	20.0
1,1-Dichloroethane	Ave	0.7266	0.6707	0.1000	1.00	0.0100	-7.7	50.0
Vinyl acetate	Ave	0.0560	0.0587		2.00	0.0100	4.8	50.0
2-Butanone	Ave	0.1677	0.1588		10.0	0.0200	-5.3	50.0
2,2-Dichloropropane	Ave	0.3066	0.2711		1.00	0.0100	-11.6	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3183		1.00	0.0100	-8.8	50.0
Bromochloromethane	Ave	0.1319	0.1204		1.00	0.0100	-8.7	50.0
Tetrahydrofuran	Lin1		0.1040		5.00	0.0100	-7.0	50.0
Chloroform	Ave	0.5879	0.5420		1.00	0.0100	-7.8	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3399		1.00	0.0100	-8.1	50.0
Cyclohexane	Ave	0.6611	0.6987		1.00	0.0100	5.7	50.0
1,1-Dichloropropene	Ave	0.4918	0.4846		1.00	0.0100	-1.5	50.0
Carbon tetrachloride	Ave	0.2374	0.2244		1.00	0.0100	-5.5	50.0
1,2-Dichloroethane	Ave	0.5192	0.4963		1.00	0.0100	-4.4	50.0
Benzene	Ave	1.523	1.401		1.00	0.0100	-8.0	50.0
Trichloroethene	Ave	0.2589	0.2498		1.00	0.0100	-3.5	50.0
1,2-Dichloropropane	Ave	0.3704	0.3538		1.00	0.0100	-4.5	20.0
Methylcyclohexane	Ave	0.4566	0.5013		1.00	0.0100	9.8	50.0
Dibromomethane	Ave	0.1666	0.1629		1.00	0.0100	-2.2	50.0
Bromodichloromethane	Ave	0.3405	0.3196		1.00	0.0100	-6.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.1380		10.0	0.0100	-12.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Qua		0.3718		1.00	0.0100	-10.9	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2941		10.0	0.0200	-1.1	50.0
Toluene	Ave	2.134	1.974		1.00	0.0100	-7.5	20.0
trans-1,3-Dichloropropene	Qua		0.4752		1.00	0.0100	-9.2	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3402		1.00	0.0100	-4.2	50.0
1,3-Dichloropropane	Ave	0.7466	0.7102		1.00	0.0100	-4.9	50.0
Tetrachloroethene	Ave	0.2524	0.2492		1.00	0.0100	-1.3	50.0
2-Hexanone	Ave	0.2856	0.2769		10.0	0.0200	-3.1	50.0
Dibromochloromethane	Qua		0.2262		1.00	0.0100	-8.3	50.0
1,2-Dibromoethane	Ave	0.3163	0.2994		1.00	0.0100	-5.4	50.0
Chlorobenzene	Ave	1.108	1.043	0.3000	1.00	0.0100	-5.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.2752		1.00	0.0100	-5.7	50.0
Ethylbenzene	Ave	0.6007	0.5731		1.00	0.0100	-4.6	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.7296		2.00	0.0200	-3.0	50.0
o-Xylene	Ave	0.7543	0.7415		1.00	0.0100	-1.7	50.0
Styrene	Lin1		1.192		1.00	0.0100	-10.6	50.0
Bromoform	Qua		0.1002	0.1000	1.00	0.0100	-8.6	50.0
Isopropylbenzene	Ave	1.782	1.763		1.00	0.0100	-1.1	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9414	0.3000	1.00	0.0100	-10.0	50.0
Bromobenzene	Ave	0.7314	0.6863		1.00	0.0100	-6.2	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2663		1.00	0.0100	-5.1	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.2780		1.00	0.0200	-7.9	50.0
n-Propylbenzene	Ave	0.8234	0.8304		1.00	0.0100	0.8	50.0
2-Chlorotoluene	Ave	0.7818	0.7600		1.00	0.0100	-2.8	50.0
1,3,5-Trimethylbenzene	Ave	2.796	2.751		1.00	0.0100	-1.6	50.0
4-Chlorotoluene	Ave	0.8226	0.7820		1.00	0.0100	-4.9	50.0
tert-Butylbenzene	Ave	2.348	2.325		1.00	0.0100	-1.0	50.0
1,2,4-Trimethylbenzene	Ave	2.905	2.871		1.00	0.0100	-1.2	50.0
sec-Butylbenzene	Ave	3.033	3.010		1.00	0.0100	-0.8	50.0
1,3-Dichlorobenzene	Ave	1.437	1.335		1.00	0.0100	-7.1	50.0
p-Isopropyltoluene	Ave	2.361	2.460		1.00	0.0100	4.2	50.0
1,4-Dichlorobenzene	Ave	1.520	1.416		1.00	0.0100	-6.8	50.0
n-Butylbenzene	Ave	2.305	2.347		1.00	0.0100	1.8	50.0
1,2-Dichlorobenzene	Ave	1.395	1.318		1.00	0.0100	-5.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0884		2.00	0.0100	0.9	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.5692		1.00	0.0100	-2.0	50.0
Hexachlorobutadiene	Ave	0.2215	0.1995		1.00	0.0100	-9.9	50.0
Naphthalene	Ave	1.766	2.025		1.00	0.0100	14.7	50.0
1,2,3-Trichlorobenzene	Ave	0.5263	0.5412		1.00	0.0100	2.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2031		0.00855	0.0102	-16.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3469		0.00861	0.0102	-15.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.642	1.430		0.00889	0.0102	-12.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.5199		0.00940	0.0102	-7.9	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: BFB3531.D BFB Injection Date: 03/26/2013

Instrument ID: A3UX16 BFB Injection Time: 12:38

Analysis Batch No.: 79501

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.6	
75	30.0 - 60.0 % of mass 95	55.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.2	(0.4)1
174	50.0 - 120.00 % of mass 95	54.9	
175	5.0 - 9.0 % of mass 174	3.8	(7.0)1
176	95.0 - 101.0 % of mass 174	53.1	(96.7)1
177	5.0 - 9.0 % of mass 176	3.5	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-79501/2	UXM7022.D	03/26/2013	13:27
	CCV 240-79501/3	UXM7023.D	03/26/2013	13:50
	LCS 240-79501/4	UXM7024.D	03/26/2013	14:12
	MB 240-79501/6	UXM7026.D	03/26/2013	14:57
MRC-MW87A-031813	240-22125-8	UXM7027.D	03/26/2013	15:21
MRC-MW76A-031813	240-22125-5	UXM7028.D	03/26/2013	15:44
MRC-MW76B-031813	240-22125-6	UXM7029.D	03/26/2013	16:06
MRC-MW78B-031813	240-22125-7	UXM7030.D	03/26/2013	16:29
TB-031813	240-22125-9	UXM7031.D	03/26/2013	16:52

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCVIS 240-79501/2 Calibration Date: 03/26/2013 13:27

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7022.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.4122		1.00	0.0100	108.2*	50.0
Chloromethane	Ave	0.4718	0.5372	0.1000	1.00	0.0100	13.9	50.0
Vinyl chloride	Ave	0.4464	0.4912		1.00	0.0100	10.0	20.0
Bromomethane	Lin1		0.1073		1.00	0.0100	-10.5	50.0
Chloroethane	Ave	0.2699	0.1803		1.00	0.0100	-33.2	50.0
Trichlorofluoromethane	Ave	0.1799	0.3671		1.00	0.0100	104.0*	50.0
Acrolein	Ave	0.0650	0.0625		20.0	0.100	-3.8	50.0
1,1-Dichloroethene	Ave	0.2978	0.3276		1.00	0.0100	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1803		1.00	0.0100	50.8*	50.0
Acetone	Ave	0.1320	0.1191		10.0	0.0200	-9.8	50.0
Iodomethane	Ave	0.3309	0.4179		1.00	0.0100	26.3	50.0
Carbon disulfide	Ave	0.9836	0.996		1.00	0.0100	1.3	50.0
Acetonitrile	Ave	0.0436	0.0524		20.0	0.100	20.3	50.0
Methyl acetate	Ave	0.3070	0.2888		10.0	0.0200	-5.9	50.0
Methylene Chloride	Ave	0.3987	0.4175		1.00	0.0100	4.7	50.0
tert-Butyl alcohol	Ave	0.0180	0.0173		50.0	0.200	-3.6	50.0
Acrylonitrile	Ave	0.1462	0.1427		20.0	0.0200	-2.4	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8352		1.00	0.0100	-11.8	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3401		1.00	0.0100	1.2	50.0
Hexane	Ave	0.0703	0.0802		1.00	0.0100	14.2	20.0
1,1-Dichloroethane	Ave	0.7266	0.7217	0.1000	1.00	0.0100	-0.7	50.0
Vinyl acetate	Ave	0.0560	0.0550		2.00	0.0100	-1.6	50.0
2-Butanone	Ave	0.1677	0.1571		10.0	0.0200	-6.4	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3527		1.00	0.0100	1.1	50.0
2,2-Dichloropropane	Ave	0.3066	0.2792		1.00	0.0100	-8.9	50.0
Bromochloromethane	Ave	0.1319	0.1381		1.00	0.0100	4.7	50.0
Tetrahydrofuran	Lin1		0.0964		5.00	0.0100	-14.3	50.0
Chloroform	Ave	0.5879	0.5959		1.00	0.0100	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3595		1.00	0.0100	-2.8	50.0
Cyclohexane	Ave	0.6611	0.7494		1.00	0.0100	13.4	50.0
1,1-Dichloropropene	Ave	0.4918	0.5356		1.00	0.0100	8.9	50.0
Carbon tetrachloride	Ave	0.2374	0.2473		1.00	0.0100	4.2	50.0
1,2-Dichloroethane	Ave	0.5192	0.5305		1.00	0.0100	2.2	50.0
Benzene	Ave	1.523	1.560		1.00	0.0100	2.5	50.0
Trichloroethene	Ave	0.2589	0.2710		1.00	0.0100	4.7	50.0
1,2-Dichloropropane	Ave	0.3704	0.3842		1.00	0.0100	3.7	20.0
Methylcyclohexane	Ave	0.4566	0.5265		1.00	0.0100	15.3	50.0
Dibromomethane	Ave	0.1666	0.1668		1.00	0.0100	0.1	50.0
1,4-Dioxane	Qua		0.0030		50.0	0.500	64.3*	50.0
Bromodichloromethane	Ave	0.3405	0.3406		1.00	0.0100	0.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCVIS 240-79501/2 Calibration Date: 03/26/2013 13:27

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7022.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.1568		10.0	0.0200	-8.7	50.0
cis-1,3-Dichloropropene	Qua		0.3957		1.00	0.0100	-5.8	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2789		10.0	0.0200	-6.2	50.0
Toluene	Ave	2.134	2.186		1.00	0.0100	2.4	20.0
trans-1,3-Dichloropropene	Qua		0.4763		1.00	0.0100	-9.0	50.0
Ethyl methacrylate	Lin1		0.5325		1.00	0.0100	-10.3	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3622		1.00	0.0100	2.0	50.0
1,3-Dichloropropane	Ave	0.7466	0.7621		1.00	0.0100	2.1	50.0
Tetrachloroethene	Ave	0.2524	0.2715		1.00	0.0100	7.6	50.0
2-Hexanone	Ave	0.2856	0.2866		10.0	0.0200	0.3	50.0
Dibromochloromethane	Qua		0.2448		1.00	0.0100	-1.6	50.0
1,2-Dibromoethane	Ave	0.3163	0.3198		1.00	0.0100	1.1	50.0
Chlorobenzene	Ave	1.108	1.166	0.3000	1.00	0.0100	5.2	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.3044		1.00	0.0100	4.3	50.0
Ethylbenzene	Ave	0.6007	0.6389		1.00	0.0100	6.4	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.8096		2.00	0.0200	7.6	50.0
o-Xylene	Ave	0.7543	0.7923		1.00	0.0100	5.0	50.0
Styrene	Lin1		1.263		1.00	0.0100	-5.6	50.0
Bromoform	Qua		0.1033	0.1000	1.00	0.0100	-6.1	50.0
Isopropylbenzene	Ave	1.782	1.860		1.00	0.0100	4.4	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9725	0.3000	1.00	0.0100	-7.1	50.0
Bromobenzene	Ave	0.7314	0.7517		1.00	0.0100	2.8	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2738		1.00	0.0100	-2.4	50.0
~~trans-1,4-Dichloro-2-butene~~	Ave	0.3017	0.1803		1.00	0.0100	~~-40.3~~	50.0
n-Propylbenzene	Ave	0.8234	0.8648		1.00	0.0100	5.0	50.0
2-Chlorotoluene	Ave	0.7818	0.7977		1.00	0.0100	2.0	50.0
1,3,5-Trimethylbenzene	Ave	2.796	3.012		1.00	0.0100	7.7	50.0
4-Chlorotoluene	Ave	0.8226	0.8678		1.00	0.0100	5.5	50.0
tert-Butylbenzene	Ave	2.348	2.272		1.00	0.0100	-3.3	50.0
1,2,4-Trimethylbenzene	Ave	2.905	3.114		1.00	0.0100	7.2	50.0
sec-Butylbenzene	Ave	3.033	3.352		1.00	0.0100	10.5	50.0
1,3-Dichlorobenzene	Ave	1.437	1.477		1.00	0.0100	2.8	50.0
p-Isopropyltoluene	Ave	2.361	2.664		1.00	0.0100	12.9	50.0
1,4-Dichlorobenzene	Ave	1.520	1.553		1.00	0.0100	2.2	50.0
n-Butylbenzene	Ave	2.305	2.616		1.00	0.0100	13.5	50.0
1,2-Dichlorobenzene	Ave	1.395	1.487		1.00	0.0100	6.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0773		2.00	0.0100	-11.7	50.0
~~1,3,5-Trichlorobenzene~~	Ave	0.6679	0.8286		1.00	0.0100	~~24.1~~	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.7562		1.00	0.0100	30.2	50.0
Hexachlorobutadiene	Ave	0.2215	0.3545		1.00	0.0100	60.0*	50.0
Naphthalene	Ave	1.766	2.165		1.00	0.0100	22.6	50.0

FORM VII 8260B

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCVIS 240-79501/2 Calibration Date: 03/26/2013 13:27

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7022.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5263	0.7647		1.00	0.0100	45.3	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2126		0.00895	0.0102	-12.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3565		0.00885	0.0102	-13.3	50.0
Toluene-d8 (Surr)	Ave	1.642	1.501		0.00934	0.0102	-8.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.5162		0.00934	0.0102	-8.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCV 240-79501/3 Calibration Date: 03/26/2013 13:50

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM7023.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5937	0.5532		2.00	0.0100	-6.8	50.0
Ethyl ether	Ave	0.2922	0.3223		2.00	0.0100	10.3	50.0
3-Chloro-1-propene	Ave	0.1704	0.1461		2.00	0.0100	-14.3	50.0
Diisopropyl ether	Ave	0.2920	0.2869		10.0	0.0500	-1.8	50.0
2-Chloro-1,3-butadiene	Ave	0.5805	0.6564		2.00	0.0100	13.1	50.0
Ethyl-t-butyl ether (ETBE)	Ave	1.022	0.8783		5.00	0.0100	-14.1	50.0
Propionitrile	Ave	0.0381	0.0444		4.00	0.0200	16.3	50.0
Ethyl acetate	Ave	0.2509	0.2727		4.00	0.0200	8.7	50.0
Methacrylonitrile	Ave	0.1909	0.2041		2.00	0.0100	6.9	50.0
Isobutyl alcohol	Ave	0.0074	0.0081		50.0	0.200	8.2	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.8526	0.6225		5.00	0.0100	-27.0	50.0
n-Heptane	Ave	0.0536	0.0616		1.00	0.0100	15.0	50.0
n-Butanol	Ave	0.0051	0.0047		50.0	0.200	-7.8	50.0
Methyl methacrylate	Ave	0.2196	0.2450		2.00	0.0100	11.6	50.0
2-Nitropropane	Ave	0.0428	0.0365		2.00	0.0200	-17.1	50.0
Cyclohexanone	Ave	0.0930	0.1326		20.0	0.100	42.6	50.0
1,2,3-Trimethylbenzene	Ave	2.644	3.065		0.0116	0.0100	15.9	50.0
2-Methylnaphthalene	Ave	0.9440	0.5664		5.00	0.0200	-40.0	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: UXM7026.D Lab Sample ID: MB 240-79501/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 03/26/2013 14:57

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-79501/4	UXM7024.D	03/26/2013 14:12
MRC-MW87A-031813	240-22125-8	UXM7027.D	03/26/2013 15:21
MRC-MW76A-031813	240-22125-5	UXM7028.D	03/26/2013 15:44
MRC-MW76B-031813	240-22125-6	UXM7029.D	03/26/2013 16:06
MRC-MW78B-031813	240-22125-7	UXM7030.D	03/26/2013 16:29
TB-031813	240-22125-9	UXM7031.D	03/26/2013 16:52

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79501/6

Matrix: Water | Lab File ID: UXM7026.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 14:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79501/6

Matrix: Water | Lab File ID: UXM7026.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 14:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	0.327	J	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.46		1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-79501/6

Matrix: Water Lab File ID: UXM7026.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 14:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
2037-26-5	Toluene-d8 (Surr)	84		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-79501/6

Matrix: Water Lab File ID: UXM7026.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/26/2013 14:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79501 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7024.D

Lab ID: LCS 240-79501/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.1	90	43-136	
Benzene	10.0	9.83	98	83-112	
Bromobenzene	10.0	9.89	99	76-115	
Bromochloromethane	10.0	9.06	91	77-120	
Bromodichloromethane	10.0	9.27	93	72-121	
Bromoform	10.0	8.31	83	40-131	
Bromomethane	10.0	7.90	79	11-185	
2-Butanone	20.0	18.0	90	60-126	
Carbon disulfide	10.0	8.93	89	62-142	
Carbon tetrachloride	10.0	9.16	92	66-128	
Chlorobenzene	10.0	9.54	95	85-110	
Chloroethane	10.0	6.03	60	25-153	
2-Chloroethyl vinyl ether	10.0	8.56 J	86	52-131	
Chloroform	10.0	9.44	94	79-117	
Chloromethane	10.0	10.1	101	44-126	
2-Chlorotoluene	10.0	9.77	98	76-116	
4-Chlorotoluene	10.0	9.71	97	77-115	
cis-1,2-Dichloroethene	10.0	9.43	94	80-113	
cis-1,3-Dichloropropene	10.0	8.37	84	61-115	
Dibromochloromethane	10.0	8.79	88	64-119	
1,2-Dibromo-3-Chloropropane	10.0	7.65	76	42-136	
1,2-Dibromoethane	10.0	9.04	90	79-113	
Dibromomethane	10.0	9.60	96	81-120	
1,2-Dichlorobenzene	10.0	10.1	101	81-110	
1,3-Dichlorobenzene	10.0	9.56	96	80-110	
1,4-Dichlorobenzene	10.0	9.63	96	82-110	
Dichlorodifluoromethane	10.0	15.5	155	19-129	*
1,1-Dichloroethane	10.0	9.48	95	82-115	
1,2-Dichloroethane	10.0	9.66	97	71-127	
1,1-Dichloroethene	10.0	9.77	98	78-131	
1,2-Dichloropropane	10.0	9.79	98	81-115	
1,3-Dichloropropane	10.0	9.52	95	79-116	
2,2-Dichloropropane	10.0	7.92	79	50-129	
1,1-Dichloropropene	10.0	9.93	99	83-114	
Diisopropyl ether	10.0	9.43	94	77-118	
Ethylbenzene	10.0	9.71	97	83-112	
Hexachlorobutadiene	10.0	10.5	105	36-134	
2-Hexanone	20.0	18.2	91	55-133	
Isopropylbenzene	10.0	9.63	96	75-114	
Methylene Chloride	10.0	9.90	99	66-131	
4-Methyl-2-pentanone	20.0	17.9	89	63-128	
Methyl tert-butyl ether	10.0	7.99	80	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7024.D

Lab ID: LCS 240-79501/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.8	99	83-113	
Naphthalene	10.0	9.41	94	32-141	
n-Butylbenzene	10.0	10.4	104	66-125	
n-Propylbenzene	10.0	10.4	104	74-121	
o-Xylene	10.0	9.75	97	83-113	
p-Isopropyltoluene	10.0	10.7	107	74-120	
sec-Butylbenzene	10.0	10.1	101	70-117	
Styrene	10.0	8.78	88	79-114	
tert-Butyl alcohol	200	164	82	70-130	
tert-Butylbenzene	10.0	10.1	101	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.36	94	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.60	86	68-118	
Tetrachloroethene	10.0	9.89	99	79-114	
Toluene	10.0	9.43	94	84-111	
trans-1,2-Dichloroethene	10.0	9.56	96	83-117	
trans-1,3-Dichloropropene	10.0	8.10	81	58-117	
1,2,3-Trichlorobenzene	10.0	10.3	103	54-126	
1,2,4-Trichlorobenzene	10.0	9.60	96	48-135	
1,1,1-Trichloroethane	10.0	8.75	88	74-118	
Trichloroethene	10.0	9.88	99	76-117	
Trichlorofluoromethane	10.0	19.4	194	49-157	*
1,2,3-Trichloropropane	10.0	9.02	90	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	15.0	150	74-151	
1,2,3-Trimethylbenzene	10.0	11.8	118	70-130	
1,2,4-Trimethylbenzene	10.0	10.2	102	76-120	
Vinyl acetate	10.0	7.34	73	46-161	
Vinyl chloride	10.0	9.89	99	53-127	
Xylenes, Total	30.0	29.6	99	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MRC-MW76A-031813	240-22125-5	85	88	82	78
MRC-MW76B-031813	240-22125-6	89	92	88	82
MRC-MW78B-031813	240-22125-7	90	96	85	81
MRC-MW87A-031813	240-22125-8	85	91	85	81
TB-031813	240-22125-9	89	92	84	79
	MB 240-79501/6	85	91	84	81
	LCS 240-79501/4	85	86	89	92

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD8260 240-74618/4 Date Analyzed: 02/07/2013 14:12

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6220.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2086115	5.70	1321775	8.39	620128	10.64
UPPER LIMIT		4172230	6.20	2643550	8.89	1240256	11.14
LOWER LIMIT		1043058	5.20	660888	7.89	310064	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-74618/8		1919196	5.70	1214489	8.39	624981	10.64
CCVIS 240-79501/2		2076075	5.70	1319694	8.39	663792	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: CCVIS 240-79501/2 Date Analyzed: 03/26/2013 13:27

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM7022.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2076075	5.70	1319694	8.39	663792	10.64
UPPER LIMIT		4152150	6.20	2639388	8.89	1327584	11.14
LOWER LIMIT		1038038	5.20	659847	7.89	331896	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-79501/3		2170349	5.70	1338057	8.39	593254	10.64
LCS 240-79501/4		2051051	5.70	1333875	8.39	652879	10.64
MB 240-79501/6		1839425	5.70	1217248	8.39	533953	10.64
240-22125-8	MRC-MW87A-031813	1850580	5.70	1205000	8.39	516089	10.64
240-22125-5	MRC-MW76A-031813	1845877	5.70	1190843	8.39	524977	10.64
240-22125-6	MRC-MW76B-031813	1745399	5.70	1130732	8.39	489729	10.64
240-22125-7	MRC-MW78B-031813	1712535	5.70	1113032	8.39	486515	10.64
240-22125-9	TB-031813	1726085	5.70	1108357	8.39	492113	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: 0312001.D DFTPP Injection Date: 03/12/2013

Instrument ID: A4AG2 DFTPP Injection Time: 07:24

Analysis Batch No.: 77944

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	42.6	
68	Less than 2.0% of mass 69	0.8	(1.5)1
69	Mass 69 relative abundance	49.2	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	60.9	
197	Less than 1.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	22.2	
365	Greater than 0.75% of mass 198	2.7	
441	Present, but less than mass 443	8.1	
442	40.0 - 110.0% of mass 198	58.0	
443	15.0 - 24.0% of mass 442	11.6	(19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-77944/2	0312002.D	03/12/2013	07:40
	STD8 240-77944/3	0312003.D	03/12/2013	08:02
	STD7 240-77944/4	0312004.D	03/12/2013	08:24
	STD6 240-77944/5	0312005.D	03/12/2013	08:46
	STD5 240-77944/6	0312006.D	03/12/2013	09:08
	STD4 240-77944/7	0312007.D	03/12/2013	09:30
	STD3 240-77944/8	0312008.D	03/12/2013	09:51
	STD2 240-77944/9	0312009.D	03/12/2013	10:13
	STD1 240-77944/10	0312010.D	03/12/2013	10:35
	ICV 240-77944/11	0312011.D	03/12/2013	10:57

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 77944

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/12/2013 07:40 Calibration End Date: 03/12/2013 10:35 Calibration ID: 14120

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-77944/10	0312010.D
Level 2	STD2 240-77944/9	0312009.D
Level 3	STD3 240-77944/8	0312008.D
Level 4	STD4 240-77944/7	0312007.D
Level 5	STD5 240-77944/6	0312006.D
Level 6	STD6 240-77944/5	0312005.D
Level 7	STD7 240-77944/4	0312004.D
Level 8	STD8 240-77944/3	0312003.D
Level 9	STD9 240-77944/2	0312002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.6668	0.7370 0.6078	0.7365 0.7106	0.7003 0.6252	0.6508	Ave		0.6794				7.3		20.0			
N-Nitrosodimethylamine	0.8877	0.7442 0.8742	0.8257 0.9415	0.9215 0.9388	0.8414	Ave		0.8719				7.7		20.0			
Pyridine	1.5306	1.2651 1.5354	1.4439 1.6599	1.5837 1.6466	1.4795	Ave		1.5181				8.3		20.0			
Ethyl methacrylate	1.1121	1.1015	1.1805	1.1743		Ave		1.1125				5.3		20.0			
3-Chloropropionitrile	0.6687	0.6668	0.7152	0.7158		Ave		0.6765				5.9		20.0			
Malononitrile	1.3609	1.3594	1.4634	1.4428		Ave		1.3117				11.0		20.0			
Benzaldehyde	1.2220 1.0494	1.0747 0.9283	1.0768 0.8744	1.2359 0.7179	1.0719	Ave		1.0279			0.0100	16.0		20.0			
Phenol	2.1626	1.9693 2.1269	2.1653 2.2678	2.4060 2.2504	2.1244	Ave		2.1841			0.8000	5.9		20.0			
Aniline	2.3900	2.1638 2.3554	2.3324 2.4923	2.5612 2.4860	2.3007	Ave		2.3852				5.3		20.0			
Bis(2-chloroethyl)ether	1.4102	1.3398 1.4097	1.4423 1.4719	1.5672 1.4568	1.3898	Ave		1.4360			0.7000	4.7		20.0			
2-Chlorophenol	1.7066	1.5319 1.7049	1.6825 1.8138	1.8546 1.8037	1.6882	Ave		1.7233			0.8000	5.9		20.0			
1,3-Dichlorobenzene	1.4743	1.4299 1.4676	1.5201 1.5587	1.6708 1.5471	1.4471	Ave		1.5145				5.2		20.0			
1,4-Dichlorobenzene	1.8194	1.7407 1.7912	1.9352 1.9172	2.0366 1.9039	1.7742	Ave		1.8648				5.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-77944/11 | Calibration Date: 03/12/2013 10:57

Instrument ID: A4AG2 | Calib Start Date: 03/12/2013 07:40

GC Column: RXI-5SILMS ID: 0.45(mm) | Calib End Date: 03/12/2013 10:35

Lab File ID: 0312011.D | Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6794	0.6386		9.40	10.0	-6.0	30.0
N-Nitrosodimethylamine	Ave	0.8719	0.8492		9.74	10.0	-2.6	30.0
Pyridine	Ave	1.518	1.449		9.55	10.0	-4.5	30.0
Benzaldehyde	Ave	1.028	0.999	0.0100	9.72	10.0	-2.8	30.0
Phenol	Ave	2.184	2.113	0.8000	9.67	10.0	-3.3	30.0
Aniline	Ave	2.385	2.326		9.75	10.0	-2.5	30.0
Bis(2-chloroethyl)ether	Ave	1.436	1.385	0.7000	9.65	10.0	-3.5	30.0
2-Chlorophenol	Ave	1.723	1.687	0.8000	9.79	10.0	-2.1	30.0
1,3-Dichlorobenzene	Ave	1.514	1.468		9.69	10.0	-3.1	30.0
1,4-Dichlorobenzene	Ave	1.865	1.821		9.77	10.0	-2.3	30.0
Benzyl alcohol	Ave	1.097	1.103		10.1	10.0	0.6	30.0
1,2-Dichlorobenzene	Ave	1.436	1.395		9.71	10.0	-2.9	30.0
2-Methylphenol	Ave	1.633	1.604	0.7000	9.82	10.0	-1.8	30.0
bis (2-chloroisopropyl) ether	Ave	1.484	1.424		9.60	10.0	-4.0	30.0
3 & 4 Methylphenol	Ave	1.685	1.669		9.90	10.0	-1.0	30.0
N-Nitrosodi-n-propylamine	Ave	1.058	1.042	0.5000	9.84	10.0	-1.6	30.0
Acetophenone	Ave	1.880	1.839	0.0100	9.78	10.0	-2.2	30.0
Hexachloroethane	Ave	0.5990	0.5797	0.3000	9.68	10.0	-3.2	30.0
Nitrobenzene	Ave	0.3883	0.3762	0.2000	9.69	10.0	-3.1	30.0
Isophorone	Ave	0.6714	0.6681	0.4000	9.95	10.0	-0.5	30.0
2-Nitrophenol	Ave	0.2038	0.2097	0.1000	10.3	10.0	2.9	30.0
2,4-Dimethylphenol	Ave	0.4608	0.4463	0.2000	9.68	10.0	-3.2	30.0
Benzoic acid	Qua		0.2119		18.7	20.0	-6.7	30.0
Bis(2-chloroethoxy)methane	Ave	0.4436	0.4336	0.3000	9.78	10.0	-2.2	30.0
2,4-Dichlorophenol	Ave	0.3208	0.3241	0.2000	10.1	10.0	1.0	30.0
1,2,4-Trichlorobenzene	Ave	0.3069	0.2950		9.61	10.0	-3.9	30.0
Naphthalene	Ave	1.017	0.9722	0.7000	9.56	10.0	-4.4	30.0
4-Chloroaniline	Ave	0.4629	0.4599	0.0100	9.94	10.0	-0.6	30.0
Hexachlorobutadiene	Ave	0.1568	0.1530	0.0100	9.75	10.0	-2.5	30.0
Caprolactam	Ave	0.0852	0.0891	0.0100	10.5	10.0	4.5	30.0
4-Chloro-3-methylphenol	Ave	0.3755	0.3839	0.2000	10.2	10.0	2.2	30.0
2-Methylnaphthalene	Ave	0.6441	0.6382	0.4000	9.91	10.0	-0.9	30.0
1-Methylnaphthalene	Ave	0.6259	0.6119		9.78	10.0	-2.2	30.0
Hexachlorocyclopentadiene	Qua		0.2638	0.0500	9.56	10.0	-4.4	30.0
2,4,6-Trichlorophenol	Ave	0.3772	0.3806	0.2000	10.1	10.0	0.9	30.0
2,4,5-Trichlorophenol	Ave	0.4137	0.4154	0.2000	10.0	10.0	0.4	30.0
1,1'-Biphenyl	Ave	1.397	1.331	0.0100	9.53	10.0	-4.7	30.0
2-Chloronaphthalene	Ave	1.086	1.028	0.8000	9.47	10.0	-5.3	30.0
2-Nitroaniline	Ave	0.3506	0.3581	0.0100	10.2	10.0	2.1	30.0
Dimethyl phthalate	Ave	1.158	1.138	0.0100	9.83	10.0	-1.7	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: 0325001.D DFTPP Injection Date: 03/25/2013

Instrument ID: A4AG2 DFTPP Injection Time: 07:24

Analysis Batch No.: 79268

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.7	
68	Less than 2.0% of mass 69	0.2	(0.6)1
69	Mass 69 relative abundance	43.6	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	57.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	23.5	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	8.4	
442	40.0 - 110.0% of mass 198	57.6	
443	15.0 - 24.0% of mass 442	11.9	(20.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-79268/2	0325002.D	03/25/2013	07:42
	MB 240-78973/23-A	0325005.D	03/25/2013	08:47
	LCS 240-78973/24-A	0325006.D	03/25/2013	09:09

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: STD6 240-79268/2 Calibration Date: 03/25/2013 07:42

Instrument ID: A4AG2 Calib Start Date: 03/12/2013 07:40

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/12/2013 10:35

Lab File ID: 0325002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6794	0.5839		8.60	10.0	-14.0	20.0
N-Nitrosodimethylamine	Ave	0.8719	0.7684		8.81	10.0	-11.9	20.0
Pyridine	Ave	1.518	1.344		8.85	10.0	-11.5	20.0
Benzaldehyde	Ave	1.028	0.9389	0.0100	9.13	10.0	-8.7	20.0
Phenol	Ave	2.184	2.039	0.8000	9.34	10.0	-6.6	20.0
Aniline	Ave	2.385	2.171		9.10	10.0	-9.0	20.0
Bis(2-chloroethyl)ether	Ave	1.436	1.321	0.7000	9.20	10.0	-8.0	20.0
2-Chlorophenol	Ave	1.723	1.659	0.8000	9.63	10.0	-3.7	20.0
1,3-Dichlorobenzene	Ave	1.514	1.449		9.57	10.0	-4.3	20.0
1,4-Dichlorobenzene	Ave	1.865	1.799		9.65	10.0	-3.5	20.0
Benzyl alcohol	Ave	1.097	0.9605		8.76	10.0	-12.4	20.0
1,2-Dichlorobenzene	Ave	1.436	1.379		9.60	10.0	-4.0	20.0
2-Methylphenol	Ave	1.633	1.541	0.7000	9.44	10.0	-5.6	20.0
bis (2-chloroisopropyl) ether	Ave	1.484	1.315		8.86	10.0	-11.4	20.0
3 & 4 Methylphenol	Ave	1.685	1.598		9.48	10.0	-5.2	20.0
N-Nitrosodi-n-propylamine	Ave	1.058	0.9637	0.5000	9.10	10.0	-9.0	20.0
Acetophenone	Ave	1.880	1.818	0.0100	9.67	10.0	-3.3	20.0
Hexachloroethane	Ave	0.5990	0.5718	0.3000	9.55	10.0	-4.5	20.0
Nitrobenzene	Ave	0.3883	0.3572	0.2000	9.20	10.0	-8.0	20.0
Isophorone	Ave	0.6714	0.6269	0.4000	9.34	10.0	-6.6	20.0
2-Nitrophenol	Ave	0.2038	0.2250	0.1000	11.0	10.0	10.4	20.0
2,4-Dimethylphenol	Ave	0.4608	0.4324	0.2000	9.38	10.0	-6.2	20.0
Benzoic acid	Qua		0.1807		16.3	20.0	-18.5	20.0
Bis(2-chloroethoxy)methane	Ave	0.4436	0.4042	0.3000	9.11	10.0	-8.9	20.0
2,4-Dichlorophenol	Ave	0.3208	0.3285	0.2000	10.2	10.0	2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3069	0.3060		9.97	10.0	-0.3	20.0
Naphthalene	Ave	1.017	0.9411	0.7000	9.25	10.0	-7.5	20.0
4-Chloroaniline	Ave	0.4629	0.4536	0.0100	9.80	10.0	-2.0	20.0
Hexachlorobutadiene	Ave	0.1568	0.1570	0.0100	10.0	10.0	0.1	20.0
Caprolactam	Ave	0.0852	0.1002	0.0100	11.8	10.0	17.6	20.0
4-Chloro-3-methylphenol	Ave	0.3755	0.3802	0.2000	10.1	10.0	1.2	20.0
2-Methylnaphthalene	Ave	0.6441	0.6286	0.4000	9.76	10.0	-2.4	20.0
1-Methylnaphthalene	Ave	0.6259	0.6008		9.60	10.0	-4.0	20.0
Hexachlorocyclopentadiene	Qua		0.2304	0.0500	8.50	10.0	-15.0	20.0
2,4,6-Trichlorophenol	Ave	0.3772	0.3978	0.2000	10.5	10.0	5.4	20.0
2,4,5-Trichlorophenol	Ave	0.4137	0.4179	0.2000	10.1	10.0	1.0	20.0
1,1'-Biphenyl	Ave	1.397	1.311	0.0100	9.39	10.0	-6.1	20.0
2-Chloronaphthalene	Ave	1.086	1.037	0.8000	9.54	10.0	-4.6	20.0
2-Nitroaniline	Ave	0.3506	0.3312	0.0100	9.45	10.0	-5.5	20.0
Dimethyl phthalate	Ave	1.158	1.147	0.0100	9.91	10.0	-0.9	20.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: 0326001.D DFTPP Injection Date: 03/26/2013

Instrument ID: A4AG2 DFTPP Injection Time: 14:14

Analysis Batch No.: 79522

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	35.0	
68	Less than 2.0% of mass 69	0.4	(0.9)1
69	Mass 69 relative abundance	42.3	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	57.5	
197	Less than 1.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	22.9	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	9.0	
442	40.0 - 110.0% of mass 198	61.9	
443	15.0 - 24.0% of mass 442	12.5	(20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-79522/2	0326002.D	03/26/2013	14:30
MRC-MW44A-031813	240-22125-4	0326022.D	03/26/2013	23:19

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: STD6 240-79522/2 Calibration Date: 03/26/2013 14:30

Instrument ID: A4AG2 Calib Start Date: 03/12/2013 07:40

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/12/2013 10:35

Lab File ID: 0326002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6794	0.6022		8.86	10.0	-11.4	20.0
N-Nitrosodimethylamine	Ave	0.8719	0.7686		8.82	10.0	-11.8	20.0
Pyridine	Ave	1.518	1.346		8.87	10.0	-11.3	20.0
Benzaldehyde	Ave	1.028	0.9012	0.0100	8.77	10.0	-12.3	20.0
Phenol	Ave	2.184	1.976	0.8000	9.05	10.0	-9.5	20.0
Aniline	Ave	2.385	2.149		9.01	10.0	-9.9	20.0
Bis(2-chloroethyl)ether	Ave	1.436	1.277	0.7000	8.89	10.0	-11.1	20.0
2-Chlorophenol	Ave	1.723	1.661	0.8000	9.64	10.0	-3.6	20.0
1,3-Dichlorobenzene	Ave	1.514	1.430		9.44	10.0	-5.6	20.0
1,4-Dichlorobenzene	Ave	1.865	1.778		9.54	10.0	-4.6	20.0
Benzyl alcohol	Ave	1.097	1.016		9.26	10.0	-7.4	20.0
1,2-Dichlorobenzene	Ave	1.436	1.377		9.59	10.0	-4.1	20.0
2-Methylphenol	Ave	1.633	1.528	0.7000	9.35	10.0	-6.5	20.0
bis (2-chloroisopropyl) ether	Ave	1.484	1.264		8.52	10.0	-14.8	20.0
3 & 4 Methylphenol	Ave	1.685	1.588		9.42	10.0	-5.8	20.0
N-Nitrosodi-n-propylamine	Ave	1.058	0.9428	0.5000	8.91	10.0	-10.9	20.0
Acetophenone	Ave	1.880	1.773	0.0100	9.43	10.0	-5.7	20.0
Hexachloroethane	Ave	0.5990	0.5558	0.3000	9.28	10.0	-7.2	20.0
Nitrobenzene	Ave	0.3883	0.3511	0.2000	9.04	10.0	-9.6	20.0
Isophorone	Ave	0.6714	0.6217	0.4000	9.26	10.0	-7.4	20.0
2-Nitrophenol	Ave	0.2038	0.2196	0.1000	10.8	10.0	7.7	20.0
2,4-Dimethylphenol	Ave	0.4608	0.4404	0.2000	9.56	10.0	-4.4	20.0
Benzoic acid	Qua		0.1901		17.0	20.0	-14.9	20.0
Bis(2-chloroethoxy)methane	Ave	0.4436	0.3982	0.3000	8.98	10.0	-10.2	20.0
2,4-Dichlorophenol	Ave	0.3208	0.3263	0.2000	10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3069	0.3071		10.0	10.0	0.0	20.0
Naphthalene	Ave	1.017	0.9489	0.7000	9.33	10.0	-6.7	20.0
4-Chloroaniline	Ave	0.4629	0.4539	0.0100	9.81	10.0	-1.9	20.0
Hexachlorobutadiene	Ave	0.1568	0.1541	0.0100	9.82	10.0	-1.8	20.0
Caprolactam	Ave	0.0852	0.0993	0.0100	11.6	10.0	16.5	20.0
4-Chloro-3-methylphenol	Ave	0.3755	0.3700	0.2000	9.85	10.0	-1.5	20.0
2-Methylnaphthalene	Ave	0.6441	0.6229	0.4000	9.67	10.0	-3.3	20.0
1-Methylnaphthalene	Ave	0.6259	0.5955		9.51	10.0	-4.9	20.0
Hexachlorocyclopentadiene	Qua		0.2413	0.0500	8.85	10.0	-11.5	20.0
2,4,6-Trichlorophenol	Ave	0.3772	0.3923	0.2000	10.4	10.0	4.0	20.0
2,4,5-Trichlorophenol	Ave	0.4137	0.4298	0.2000	10.4	10.0	3.9	20.0
1,1'-Biphenyl	Ave	1.397	1.341	0.0100	9.60	10.0	-4.0	20.0
2-Chloronaphthalene	Ave	1.086	1.064	0.8000	9.79	10.0	-2.1	20.0
2-Nitroaniline	Ave	0.3506	0.3309	0.0100	9.44	10.0	-5.6	20.0
Dimethyl phthalate	Ave	1.158	1.165	0.0100	10.1	10.0	0.6	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab File ID: 0325005.D Lab Sample ID: MB 240-78973/23-A

Matrix: Water Date Extracted: 03/21/2013 09:26

Instrument ID: A4AG2 Date Analyzed: 03/25/2013 08:47

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-78973/24-A	0325006.D	03/25/2013 09:09
MRC-MW44A-031813	240-22125-4	0326022.D	03/26/2013 23:19

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-78973/23-A

Matrix: Water | Lab File ID: 0325005.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 03/21/2013 09:26

Sample wt/vol: 1000(mL) | Date Analyzed: 03/25/2013 08:47

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79268 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	68		20-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	56		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	73		21-110
4165-62-2	Phenol-d5 (Surr)	60		21-110
1718-51-0	Terphenyl-d14 (Surr)	84		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0325006.D

Lab ID: LCS 240-78973/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	11.1	56	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW44A-031813	240-22125-4	53	52	63	60	54	58
	MB 240-78973/23-A	61	60	73	68	56	84
	LCS 240-78973/24-A	68	66	82	78	67	96

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD6 240-77944/5 Date Analyzed: 03/12/2013 08:46

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0312005.D Heated Purge: (Y/N) N

Calibration ID: 14120

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		279005	6.01	1102560	7.12	613025	8.62
UPPER LIMIT		558010	6.51	2205120	7.62	1226050	9.12
LOWER LIMIT		139503	5.51	551280	6.62	306513	8.12
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-77944/11		318147	6.01	1238286	7.12	716928	8.62
STD6 240-79268/2 CCVIS		240487	6.10	945230	7.22	553564	8.73
STD6 240-79522/2 CCVIS		255324	6.08	989550	7.21	562717	8.70

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD6 240-77944/5 Date Analyzed: 03/12/2013 08:46

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0312005.D Heated Purge: (Y/N) N

Calibration ID: 14120

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		989111	9.89	999343	12.49	849124	14.60
UPPER LIMIT		1978222	10.39	1998686	12.99	1698248	15.10
LOWER LIMIT		494556	9.39	499672	11.99	424562	14.10
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-77944/11		1161768	9.88	1170070	12.49	975345	14.60
STD6 240-79268/2 CCVIS		918754	9.99	936396	12.64	827859	14.80
STD6 240-79522/2 CCVIS		943371	9.97	954843	12.61	833625	14.75

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD6 240-79268/2 Date Analyzed: 03/25/2013 07:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0325002.D Heated Purge: (Y/N) N

Calibration ID: 14129

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		240487	6.10	945230	7.22	553564	8.73
UPPER LIMIT		480974	6.60	1890460	7.72	1107128	9.23
LOWER LIMIT		120244	5.60	472615	6.72	276782	8.23
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-78973/23-A		237376	6.10	929388	7.22	551932	8.72
LCS 240-78973/24-A		228453	6.10	891658	7.22	521090	8.72

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD6 240-79268/2 Date Analyzed: 03/25/2013 07:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0325002.D Heated Purge: (Y/N) N

Calibration ID: 14129

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		918754	9.99	936396	12.64	827859	14.80
UPPER LIMIT		1837508	10.49	1872792	13.14	1655718	15.30
LOWER LIMIT		459377	9.49	468198	12.14	413930	14.30
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-78973/23-A		953619	9.99	971961	12.64	845007	14.79
LCS 240-78973/24-A		895159	9.99	916298	12.64	790922	14.80

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD6 240-79522/2 Date Analyzed: 03/26/2013 14:30

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0326002.D Heated Purge: (Y/N) N

Calibration ID: 14129

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		255324	6.08	989550	7.21	562717	8.70
UPPER LIMIT		510648	6.58	1979100	7.71	1125434	9.20
LOWER LIMIT		127662	5.58	494775	6.71	281359	8.20
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22125-4	MRC-MW44A-031813	260073	6.08	1025854	7.20	613028	8.70

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: STD6 240-79522/2 Date Analyzed: 03/26/2013 14:30

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0326002.D Heated Purge: (Y/N) N

Calibration ID: 14129

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		943371	9.97	954843	12.61	833625	14.75
UPPER LIMIT		1886742	10.47	1909686	13.11	1667250	15.25
LOWER LIMIT		471686	9.47	477422	12.11	416813	14.25
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22125-4	MRC-MW44A-031813	1087232	9.97	1115985	12.60	967671	14.75

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

Method 8082

Polychlorinated Biphenyls (PCBs) by Gas Chromatography by Method 8082

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Instrument ID: A2HP12 Start Date: 01/15/2013 02:00

Analysis Batch Number: 71871 End Date: 01/16/2013 06:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-71871/3 IC	1232	01/15/2013 02:00	1		CLP-1 0.53(mm)
STD005 240-71871/3 IC		01/15/2013 02:00	1	P1200003.D	CLP-2 0.53(mm)
STD01 240-71871/4 IC		01/15/2013 02:15	1		CLP-1 0.53(mm)
STD01 240-71871/4 IC		01/15/2013 02:15	1	P1200004.D	CLP-2 0.53(mm)
STD02 240-71871/5 IC		01/15/2013 02:29	1		CLP-1 0.53(mm)
STD02 240-71871/5 IC		01/15/2013 02:29	1	P1200005.D	CLP-2 0.53(mm)
STD05 240-71871/6 IC		01/15/2013 02:43	1		CLP-1 0.53(mm)
STD05 240-71871/6 IC		01/15/2013 02:43	1	P1200006.D	CLP-2 0.53(mm)
STD1 240-71871/7 IC		01/15/2013 02:57	1		CLP-1 0.53(mm)
STD1 240-71871/7 IC		01/15/2013 02:57	1	P1200007.D	CLP-2 0.53(mm)
STD2 240-71871/8 IC		01/15/2013 03:11	1		CLP-1 0.53(mm)
STD2 240-71871/8 IC		01/15/2013 03:11	1	P1200008.D	CLP-2 0.53(mm)
STD005 240-71871/9 IC		01/15/2013 03:26	1		CLP-1 0.53(mm)
STD005 240-71871/9 IC	1242	01/15/2013 03:26	1	P1200009.D	CLP-2 0.53(mm)
STD01 240-71871/10 IC		01/15/2013 03:40	1		CLP-1 0.53(mm)
STD01 240-71871/10 IC		01/15/2013 03:40	1	P1200010.D	CLP-2 0.53(mm)
STD02 240-71871/11 IC		01/15/2013 03:54	1		CLP-1 0.53(mm)
STD02 240-71871/11 IC		01/15/2013 03:54	1	P1200011.D	CLP-2 0.53(mm)
STD05 240-71871/12 IC		01/15/2013 04:08	1		CLP-1 0.53(mm)
STD05 240-71871/12 IC		01/15/2013 04:08	1	P1200012.D	CLP-2 0.53(mm)
STD1 240-71871/13 IC		01/15/2013 04:22	1		CLP-1 0.53(mm)
STD1 240-71871/13 IC		01/15/2013 04:22	1	P1200013.D	CLP-2 0.53(mm)
STD2 240-71871/14 IC		01/15/2013 04:37	1		CLP-1 0.53(mm)
STD2 240-71871/14 IC		01/15/2013 04:37	1	P1200014.D	CLP-2 0.53(mm)
STD005 240-71871/15 IC	1248	01/15/2013 04:51	1		CLP-1 0.53(mm)
STD005 240-71871/15 IC		01/15/2013 04:51	1	P1200015.D	CLP-2 0.53(mm)
STD01 240-71871/16 IC		01/15/2013 05:05	1		CLP-1 0.53(mm)
STD01 240-71871/16 IC		01/15/2013 05:05	1	P1200016.D	CLP-2 0.53(mm)
STD02 240-71871/17 IC		01/15/2013 05:20	1		CLP-1 0.53(mm)
STD02 240-71871/17 IC		01/15/2013 05:20	1	P1200017.D	CLP-2 0.53(mm)
STD05 240-71871/18 IC		01/15/2013 05:34	1		CLP-1 0.53(mm)
STD05 240-71871/18 IC		01/15/2013 05:34	1	P1200018.D	CLP-2 0.53(mm)
STD1 240-71871/19 IC		01/15/2013 05:48	1		CLP-1 0.53(mm)
STD1 240-71871/19 IC		01/15/2013 05:48	1	P1200019.D	CLP-2 0.53(mm)
STD2 240-71871/20 IC		01/15/2013 06:02	1		CLP-1 0.53(mm)
STD2 240-71871/20 IC		01/15/2013 06:02	1	P1200020.D	CLP-2 0.53(mm)
STD005 240-71871/21 IC	1221/1254	01/15/2013 06:16	1		CLP-1 0.53(mm)

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PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Instrument ID: A2HP12 Start Date: 01/15/2013 02:00

Analysis Batch Number: 71871 End Date: 01/16/2013 06:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-71871/21 IC	1221/1254	01/15/2013 06:16	1	P1200021.D	CLP-2 0.53(mm)
STD01 240-71871/22 IC		01/15/2013 06:31	1		CLP-1 0.53(mm)
STD01 240-71871/22 IC		01/15/2013 06:31	1	P1200022.D	CLP-2 0.53(mm)
STD02 240-71871/23 IC		01/15/2013 06:45	1		CLP-1 0.53(mm)
STD02 240-71871/23 IC		01/15/2013 06:45	1	P1200023.D	CLP-2 0.53(mm)
STD05 240-71871/24 IC		01/15/2013 06:59	1		CLP-1 0.53(mm)
STD05 240-71871/24 IC		01/15/2013 06:59	1	P1200024.D	CLP-2 0.53(mm)
STD1 240-71871/25 IC		01/15/2013 07:13	1		CLP-1 0.53(mm)
STD1 240-71871/25 IC		01/15/2013 07:13	1	P1200025.D	CLP-2 0.53(mm)
STD2 240-71871/26 IC		01/15/2013 07:27	1		CLP-1 0.53(mm)
STD2 240-71871/26 IC		01/15/2013 07:27	1	P1200026.D	CLP-2 0.53(mm)
STD005 240-71871/27 IC	1016/1262	01/15/2013 07:41	1		CLP-1 0.53(mm)
STD005 240-71871/27 IC		01/15/2013 07:41	1	P1200027.D	CLP-2 0.53(mm)
STD01 240-71871/28 IC		01/15/2013 07:55	1		CLP-1 0.53(mm)
STD01 240-71871/28 IC		01/15/2013 07:55	1	P1200028.D	CLP-2 0.53(mm)
STD02 240-71871/29 IC		01/15/2013 08:10	1		CLP-1 0.53(mm)
STD02 240-71871/29 IC		01/15/2013 08:10	1	P1200029.D	CLP-2 0.53(mm)
STD05 240-71871/30 ICRT		01/15/2013 08:24	1		CLP-1 0.53(mm)
STD05 240-71871/30 ICRT		01/15/2013 08:24	1	P1200030.D	CLP-2 0.53(mm)
STD1 240-71871/31 IC		01/15/2013 08:38	1		CLP-1 0.53(mm)
STD1 240-71871/31 IC		01/15/2013 08:38	1	P1200031.D	CLP-2 0.53(mm)
STD2 240-71871/32 IC		01/15/2013 08:52	1		CLP-1 0.53(mm)
STD2 240-71871/32 IC		01/15/2013 08:52	1	P1200032.D	CLP-2 0.53(mm)
STD005 240-71871/33 IC		01/15/2013 09:06	1		CLP-1 0.53(mm)
STD005 240-71871/33 IC		01/15/2013 09:06	1		CLP-2 0.53(mm)
STD01 240-71871/34 IC		01/15/2013 09:21	1		CLP-1 0.53(mm)
STD01 240-71871/34 IC		01/15/2013 09:21	1		CLP-2 0.53(mm)
STD02 240-71871/35 IC		01/15/2013 09:35	1		CLP-1 0.53(mm)
STD02 240-71871/35 IC		01/15/2013 09:35	1		CLP-2 0.53(mm)
STD05 240-71871/36 IC		01/15/2013 09:49	1		CLP-1 0.53(mm)
STD05 240-71871/36 IC		01/15/2013 09:49	1		CLP-2 0.53(mm)
STD1 240-71871/37 IC		01/15/2013 10:03	1		CLP-1 0.53(mm)
STD1 240-71871/37 IC		01/15/2013 10:03	1		CLP-2 0.53(mm)
STD2 240-71871/38 IC		01/15/2013 10:17	1		CLP-1 0.53(mm)
STD2 240-71871/38 IC		01/15/2013 10:17	1		CLP-2 0.53(mm)

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PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Instrument ID: A2HP12 Start Date: 01/15/2013 02:00

Analysis Batch Number: 71871 End Date: 01/16/2013 06:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-71871/39 IC		01/15/2013 10:31	1		CLP-1 0.53(mm)
STD005 240-71871/39 IC		01/15/2013 10:31	1		CLP-2 0.53(mm)
STD01 240-71871/40 IC		01/15/2013 10:46	1		CLP-1 0.53(mm)
STD01 240-71871/40 IC		01/15/2013 10:46	1		CLP-2 0.53(mm)
STD02 240-71871/41 IC		01/15/2013 11:00	1		CLP-1 0.53(mm)
STD02 240-71871/41 IC		01/15/2013 11:00	1		CLP-2 0.53(mm)
STD05 240-71871/42 IC		01/15/2013 11:14	1		CLP-1 0.53(mm)
STD05 240-71871/42 IC		01/15/2013 11:14	1		CLP-2 0.53(mm)
STD1 240-71871/43 IC		01/15/2013 11:28	1		CLP-1 0.53(mm)
STD1 240-71871/43 IC		01/15/2013 11:28	1		CLP-2 0.53(mm)
STD2 240-71871/44 IC		01/15/2013 11:43	1		CLP-1 0.53(mm)
STD2 240-71871/44 IC		01/15/2013 11:43	1		CLP-2 0.53(mm)
ICV 240-71871/45		01/15/2013 11:57	1		CLP-1 0.53(mm)
ICV 240-71871/45		01/15/2013 11:57	1		CLP-2 0.53(mm)
ICV 240-71871/48		01/15/2013 12:39	1		CLP-1 0.53(mm)
ICV 240-71871/48		01/15/2013 12:39	1		CLP-2 0.53(mm)
ICV 240-71871/51		01/15/2013 13:22	1		CLP-1 0.53(mm)
ICV 240-71871/51		01/15/2013 13:22	1		CLP-2 0.53(mm)
ICV 240-71871/52		01/15/2013 13:36	1		CLP-1 0.53(mm)
ICV 240-71871/52		01/15/2013 13:36	1		CLP-2 0.53(mm)
ICV 240-71871/54		01/15/2013 13:50	1		CLP-1 0.53(mm)
ICV 240-71871/54		01/15/2013 13:50	1		CLP-2 0.53(mm)
ICV 240-71871/55		01/15/2013 14:04	1		CLP-1 0.53(mm)
ICV 240-71871/55		01/15/2013 14:04	1		CLP-2 0.53(mm)
ICV 240-71871/56		01/15/2013 14:18	1		CLP-1 0.53(mm)
ICV 240-71871/56		01/15/2013 14:18	1		CLP-2 0.53(mm)
ICV 240-71871/50		01/16/2013 06:34	1		CLP-1 0.53(mm)
ICV 240-71871/50		01/16/2013 06:34	1	P1200056.D	CLP-2 0.53(mm)

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FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 02:00 Calibration End Date: 01/15/2013 03:11 Calibration ID: 13247

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/3	P1200003.D
Level 2	STD01 240-71871/4	P1200004.D
Level 3	STD02 240-71871/5	P1200005.D
Level 4	STD05 240-71871/6	P1200006.D
Level 5	STD1 240-71871/7	P1200007.D
Level 6	STD2 240-71871/8	P1200008.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1232 Peak 1	52383280 40505776	50357420 38429067	46308960	41836890	Ave		44970232.2				13.0		20.0			
PCB-1232 Peak 2	40962040 31078956	38832880 29570806	36604495	32506646	Ave		34925970.4				13.0		20.0			
PCB-1232 Peak 3	74741760 63083679	68725720 62371387	67855470	62809772	Ave		66597964.7				7.3		20.0			
PCB-1232 Peak 4	36150440 27577495	32009460 26002874	31588925	28267224	Ave		30266069.6				12.0		20.0			
PCB-1232 Peak 5	25066040 22175123	24055240 21561810	24525790	22617288	Ave		23333548.4				6.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 02:00 Calibration End Date: 01/15/2013 03:11 Calibration ID: 13247

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/3	P1200003.D
Level 2	STD01 240-71871/4	P1200004.D
Level 3	STD02 240-71871/5	P1200005.D
Level 4	STD05 240-71871/6	P1200006.D
Level 5	STD1 240-71871/7	P1200007.D
Level 6	STD2 240-71871/8	P1200008.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1232 Peak 1	2.169	2.168	2.168	2.169	2.167	2.168					2.119 - 2.219	2.168
PCB-1232 Peak 2	2.573	2.571	2.571	2.571	2.570	2.570					2.523 - 2.623	2.571
PCB-1232 Peak 3	3.032	3.029	3.029	3.030	3.029	3.029					2.982 - 3.082	3.030
PCB-1232 Peak 4	3.172	3.170	3.169	3.170	3.169	3.169					3.122 - 3.222	3.170
PCB-1232 Peak 5	3.789	3.784	3.785	3.786	3.785	3.785					3.739 - 3.839	3.786

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 02:00 Calibration End Date: 01/15/2013 03:11 Calibration ID: 13247

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/3	P1200003.D
Level 2	STD01 240-71871/4	P1200004.D
Level 3	STD02 240-71871/5	P1200005.D
Level 4	STD05 240-71871/6	P1200006.D
Level 5	STD1 240-71871/7	P1200007.D
Level 6	STD2 240-71871/8	P1200008.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	Ave	2619164 76858134	5035742	9261792	20918445	40505776	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	Ave	2048102 59141611	3883288	7320899	16253323	31078956	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	Ave	3737088 124742774	6872572	13571094	31404886	63083679	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	Ave	1807522 52005747	3200946	6317785	14133612	27577495	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	Ave	1253302 43123619	2405524	4905158	11308644	22175123	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 03:26 Calibration End Date: 01/15/2013 04:37 Calibration ID: 13253

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/9	P1200009.D
Level 2	STD01 240-71871/10	P1200010.D
Level 3	STD02 240-71871/11	P1200011.D
Level 4	STD05 240-71871/12	P1200012.D
Level 5	STD1 240-71871/13	P1200013.D
Level 6	STD2 240-71871/14	P1200014.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1242 Peak 1	38961400 29330283	35718970 27011055	33033705	30012804	Ave		32344702.8				14.0		20.0			
PCB-1242 Peak 2	74982040 54490928	70492000 52462752	64088970	58528862	Ave		62507591.9				14.0		20.0			
PCB-1242 Peak 3	138552360 118801296	133341030 113848526	123048790	117071112	Ave		124110519				7.9		20.0			
PCB-1242 Peak 4	65415120 50755737	61981980 47196641	56042160	51203116	Ave		55432459.0				13.0		20.0			
PCB-1242 Peak 5	59376040 39267703	53635920 37688073	46216860	40071356	Ave		46042658.6				19.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 03:26 Calibration End Date: 01/15/2013 04:37 Calibration ID: 13253

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/9	P1200009.D
Level 2	STD01 240-71871/10	P1200010.D
Level 3	STD02 240-71871/11	P1200011.D
Level 4	STD05 240-71871/12	P1200012.D
Level 5	STD1 240-71871/13	P1200013.D
Level 6	STD2 240-71871/14	P1200014.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1242 Peak 1	2.168	2.167	2.168	2.167	2.168	2.168					2.118 - 2.218	2.168
PCB-1242 Peak 2	2.571	2.572	2.571	2.571	2.571	2.572					2.521 - 2.621	2.571
PCB-1242 Peak 3	3.029	3.028	3.030	3.029	3.029	3.029					2.979 - 3.079	3.029
PCB-1242 Peak 4	3.169	3.169	3.169	3.168	3.169	3.169					3.119 - 3.219	3.169
PCB-1242 Peak 5	3.658	3.657	3.659	3.658	3.659	3.658					3.608 - 3.708	3.658

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 03:26 Calibration End Date: 01/15/2013 04:37 Calibration ID: 13253

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/9	P1200009.D
Level 2	STD01 240-71871/10	P1200010.D
Level 3	STD02 240-71871/11	P1200011.D
Level 4	STD05 240-71871/12	P1200012.D
Level 5	STD1 240-71871/13	P1200013.D
Level 6	STD2 240-71871/14	P1200014.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	Ave	1948070 54022110	3571897	6606741	15006402	29330283	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	Ave	3749102 104925503	7049200	12817794	29264431	54490928	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	Ave	6927618 227697052	13334103	24609758	58535556	118801296	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	Ave	3270756 94393282	6198198	11208432	25601558	50755737	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	Ave	2968802 75376145	5363592	9243372	20035678	39267703	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 04:51 Calibration End Date: 01/15/2013 06:02 Calibration ID: 13217

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/15	P1200015.D
Level 2	STD01 240-71871/16	P1200016.D
Level 3	STD02 240-71871/17	P1200017.D
Level 4	STD05 240-71871/18	P1200018.D
Level 5	STD1 240-71871/19	P1200019.D
Level 6	STD2 240-71871/20	P1200020.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1248 Peak 1	37425540 27479925	34259850 26028849	32480950	29268424	Ave		31157256.4				14.0		20.0			
PCB-1248 Peak 2	92811580 75891071	83902900 73104253	82044030	76519212	Ave		80712174.3				8.9		20.0			
PCB-1248 Peak 3	85956760 65430569	77818980 62485124	72915065	67689032	Ave		72049255.1				12.0		20.0			
PCB-1248 Peak 4	84403100 70570607	77507550 68609598	75827455	70987668	Ave		74650996.3				7.8		20.0			
PCB-1248 Peak 5	50785860 41429568	47127600 39635518	47371445	42286748	Ave		44772789.8				9.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 04:51 Calibration End Date: 01/15/2013 06:02 Calibration ID: 13217

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/15	P1200015.D
Level 2	STD01 240-71871/16	P1200016.D
Level 3	STD02 240-71871/17	P1200017.D
Level 4	STD05 240-71871/18	P1200018.D
Level 5	STD1 240-71871/19	P1200019.D
Level 6	STD2 240-71871/20	P1200020.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1248 Peak 1	2.570	2.570	2.569	2.569	2.567	2.569					2.520 - 2.620	2.569
PCB-1248 Peak 2	3.026	3.026	3.028	3.026	3.027	3.027					2.976 - 3.076	3.027
PCB-1248 Peak 3	3.658	3.659	3.659	3.658	3.658	3.658					3.608 - 3.708	3.658
PCB-1248 Peak 4	4.063	4.062	4.063	4.062	4.062	4.063					4.013 - 4.113	4.063
PCB-1248 Peak 5	4.788	4.789	4.788	4.788	4.787	4.787					4.738 - 4.838	4.788

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 04:51 Calibration End Date: 01/15/2013 06:02 Calibration ID: 13217

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/15	P1200015.D
Level 2	STD01 240-71871/16	P1200016.D
Level 3	STD02 240-71871/17	P1200017.D
Level 4	STD05 240-71871/18	P1200018.D
Level 5	STD1 240-71871/19	P1200019.D
Level 6	STD2 240-71871/20	P1200020.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	Ave	1871277 52057699	3425985	6496190	14634212	27479925	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	Ave	4640579 146208505	8390290	16408806	38259606	75891071	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	Ave	4297838 124970249	7781898	14583013	33844516	65430569	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	Ave	4220155 137219196	7750755	15165491	35493834	70570607	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	Ave	2539293 79271036	4712760	9474289	21143374	41429568	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 06:16 Calibration End Date: 01/15/2013 07:27 Calibration ID: 13223

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/21	P1200021.D
Level 2	STD01 240-71871/22	P1200022.D
Level 3	STD02 240-71871/23	P1200023.D
Level 4	STD05 240-71871/24	P1200024.D
Level 5	STD1 240-71871/25	P1200025.D
Level 6	STD2 240-71871/26	P1200026.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1221 Peak 1	27407440 20341923	24656180 18889433	23942290	21223636	Ave		22743483.6				14.0		20.0			
PCB-1221 Peak 2	18276020 13606432	17082650 12395960	16229445	14426966	Ave		15336245.4				15.0		20.0			
PCB-1221 Peak 3	65986560 49719059	59911020 45696849	57240885	51077918	Ave		54938715.2				14.0		20.0			
PCB-1254 Peak 1	105116640 81324213	83186960 80573070	91693840	83899844	Ave		87632427.8				11.0		20.0			
PCB-1254 Peak 2	159609460 125606383	124575190 125721589	140237525	130172916	Ave		134320511				10.0		20.0			
PCB-1254 Peak 3	116430800 82644914	83935740 87941694	96434865	88585168	Ave		92662196.8				14.0		20.0			
PCB-1254 Peak 4	131137080 95786556	95257300 101385191	108556490	101120838	Ave		105540576				13.0		20.0			
PCB-1254 Peak 5	148088640 110102413	108481070 117732416	126403870	117217196	Ave		121337601				12.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 06:16 Calibration End Date: 01/15/2013 07:27 Calibration ID: 13223

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/21	P1200021.D
Level 2	STD01 240-71871/22	P1200022.D
Level 3	STD02 240-71871/23	P1200023.D
Level 4	STD05 240-71871/24	P1200024.D
Level 5	STD1 240-71871/25	P1200025.D
Level 6	STD2 240-71871/26	P1200026.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1221 Peak 1	1.977	1.978	1.978	1.977	1.977	1.977					1.927 - 2.027	1.977
PCB-1221 Peak 2	2.111	2.111	2.110	2.111	2.112	2.110					2.061 - 2.161	2.111
PCB-1221 Peak 3	2.167	2.168	2.169	2.168	2.168	2.168					2.117 - 2.217	2.168
PCB-1254 Peak 1	4.311	4.312	4.311	4.311	4.312	4.312					4.261 - 4.361	4.312
PCB-1254 Peak 2	4.787	4.788	4.789	4.788	4.788	4.788					4.737 - 4.837	4.788
PCB-1254 Peak 3	5.034	5.034	5.034	5.034	5.035	5.034					4.984 - 5.084	5.034
PCB-1254 Peak 4	5.394	5.396	5.395	5.395	5.396	5.395					5.344 - 5.444	5.395
PCB-1254 Peak 5	5.598	5.600	5.599	5.599	5.600	5.600					5.548 - 5.648	5.599

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 06:16 Calibration End Date: 01/15/2013 07:27 Calibration ID: 13223

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/21	P1200021.D
Level 2	STD01 240-71871/22	P1200022.D
Level 3	STD02 240-71871/23	P1200023.D
Level 4	STD05 240-71871/24	P1200024.D
Level 5	STD1 240-71871/25	P1200025.D
Level 6	STD2 240-71871/26	P1200026.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	Ave	1370372 37778865	2465618	4788458	10611818	20341923	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	Ave	913801 24791919	1708265	3245889	7213483	13606432	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	Ave	3299328 91393698	5991102	11448177	25538959	49719059	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	Ave	5255832 161146139	8318696	18338768	41949922	81324213	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	Ave	7980473 251443178	12457519	28047505	65086458	125606383	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	Ave	5821540 175883388	8393574	19286973	44292584	82644914	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	Ave	6556854 202770383	9525730	21711298	50560419	95786556	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	Ave	7404432 235464831	10848107	25280774	58608598	110102413	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 07:41 Calibration End Date: 01/15/2013 08:52 Calibration ID: 13229

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/27	P1200027.D
Level 2	STD01 240-71871/28	P1200028.D
Level 3	STD02 240-71871/29	P1200029.D
Level 4	STD05 240-71871/30	P1200030.D
Level 5	STD1 240-71871/31	P1200031.D
Level 6	STD2 240-71871/32	P1200032.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1016 Peak 1	50369560 35197745	43939230 33518829	41441015	37551292	Ave		40336278.4				16.0		20.0			
PCB-1016 Peak 2	92922380 68884331	84546520 65405323	80124425	73310962	Ave		77532323.4				13.0		20.0			
PCB-1016 Peak 3	174043480 144846412	159787410 146224354	155906990	151078948	Ave		155314599				6.9		20.0			
PCB-1016 Peak 4	82446200 62725424	74196820 60612308	71088170	65980566	Ave		69508247.9				12.0		20.0			
PCB-1016 Peak 5	66799160 47997189	59015670 47383708	54522835	50426112	Ave		54357445.6				14.0		20.0			
PCB-1260 Peak 1	128549440 96095720	114157380 96060319	101191395	99711280	Ave		105960922				12.0		20.0			
PCB-1260 Peak 2	215554880 103053507	135034800 105428548	104475340	106666106	Lin1	4373366.57	100306428							0.9960		0.9900
PCB-1260 Peak 3	193698320 162410054	181559380 169533544	158984370	169920632	Ave		172684383				7.5		20.0			
PCB-1260 Peak 4	198804400 182547589	198589870 189151445	163956975	187717906	Ave		186794697				6.9		20.0			
PCB-1260 Peak 5	148517300 134062141	152082960 136827197	121805240	138349244	Ave		138607347				7.8		20.0			
Tetrachloro-m-xylene	2504102800 2279319040	2327123000 2294287880	2369150700	2299800880	Ave		2345630717				3.6		20.0			
DCB Decachlorobipheny1	2160940800 1841268820	2246921600 1754820960	1689006800	1845986600	Ave		1923157597				12.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 07:41 Calibration End Date: 01/15/2013 08:52 Calibration ID: 13229

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/27	P1200027.D
Level 2	STD01 240-71871/28	P1200028.D
Level 3	STD02 240-71871/29	P1200029.D
Level 4	STD05 240-71871/30	P1200030.D
Level 5	STD1 240-71871/31	P1200031.D
Level 6	STD2 240-71871/32	P1200032.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1016 Peak 1	2.169	2.168	2.168	2.169	2.168	2.168					2.119 - 2.219	2.168
PCB-1016 Peak 2	2.571	2.571	2.572	2.572	2.572	2.571					2.522 - 2.622	2.572
PCB-1016 Peak 3	3.029	3.030	3.029	3.029	3.029	3.029					2.979 - 3.079	3.029
PCB-1016 Peak 4	3.169	3.170	3.169	3.169	3.169	3.168					3.119 - 3.219	3.169
PCB-1016 Peak 5	3.659	3.660	3.659	3.659	3.659	3.658					3.609 - 3.709	3.659
PCB-1260 Peak 1	4.998	4.998	4.998	4.998	4.998	4.998					4.948 - 5.048	4.998
PCB-1260 Peak 2	5.228	5.229	5.230	5.229	5.229	5.228					5.179 - 5.279	5.229
PCB-1260 Peak 3	5.596	5.597	5.597	5.597	5.596	5.597					5.547 - 5.647	5.597
PCB-1260 Peak 4	6.284	6.285	6.284	6.284	6.283	6.283					6.234 - 6.334	6.284
PCB-1260 Peak 5	6.665	6.666	6.665	6.664	6.664	6.665					6.614 - 6.714	6.665
Tetrachloro-m-xylene	1.696	1.696	1.696	1.696	1.695	1.695					1.646 - 1.746	1.696
DCB Decachlorobiphenyl	7.900	7.900	7.901	7.899	7.899	7.899					7.849 - 7.949	7.900

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22125-1 Analy Batch No.: 71871

SDG No.:

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/15/2013 07:41 Calibration End Date: 01/15/2013 08:52 Calibration ID: 13229

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-71871/27	P1200027.D
Level 2	STD01 240-71871/28	P1200028.D
Level 3	STD02 240-71871/29	P1200029.D
Level 4	STD05 240-71871/30	P1200030.D
Level 5	STD1 240-71871/31	P1200031.D
Level 6	STD2 240-71871/32	P1200032.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	Ave	2518478 67037657	4393923	8288203	18775646	35197745	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	Ave	4646119 130810645	8454652	16024885	36655481	68884331	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	Ave	8702174 292448708	15978741	31181398	75539474	144846412	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	Ave	4122310 121224615	7419682	14217634	32990283	62725424	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	Ave	3339958 94767415	5901567	10904567	25213056	47997189	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	Ave	6427472 192120638	11415738	20238279	49855640	96095720	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	Lin1	10777744 210857095	13503480	20895068	53333053	103053507	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	Ave	9684916 339067087	18155938	31796874	84960316	162410054	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	Ave	9940220 378302889	19858987	32791395	93858953	182547589	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	Ave	7425865 273654394	15208296	24361048	69174622	134062141	0.0500 2.00	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	Ave	6260257 229428788	11635615	23691507	57495022	113965952	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	Ave	5402352 175482096	11234608	16890068	46149665	92063441	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:

Ave = Average
Lin1 = Linear 1/conc

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-71871/50 Calibration Date: 01/16/2013 06:34

Instrument ID: A2HP12 Calib Start Date: 01/15/2013 07:41

GC Column: CLP-2 ID: 0.53(mm) Calib End Date: 01/15/2013 08:52

Lab File ID: P1200056.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	40336278	39260982		0.973	1.00	-2.7	20.0
PCB-1016 Peak 2	Ave	77532323	80220593		1.03	1.00	3.5	20.0
PCB-1016 Peak 3	Ave	155314599	175112810		1.13	1.00	12.7	20.0
PCB-1016 Peak 4	Ave	69508248	74175901		1.07	1.00	6.7	20.0
PCB-1016 Peak 5	Ave	54357446	55823252		1.03	1.00	2.7	20.0
PCB-1260 Peak 1	Ave	105960922	100397500		0.947	1.00	-5.3	20.0
PCB-1260 Peak 2	Lin1		105095239		1.00	1.00	0.4	20.0
PCB-1260 Peak 3	Ave	172684383	157238683		0.911	1.00	-8.9	20.0
PCB-1260 Peak 4	Ave	186794697	211153114		1.13	1.00	13.0	20.0
PCB-1260 Peak 5	Ave	138607347	143623033		1.04	1.00	3.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-71871/50 Calibration Date: 01/16/2013 06:34

Instrument ID: A2HP12 Calib Start Date: 01/15/2013 07:41

GC Column: CLP-2 ID: 0.53(mm) Calib End Date: 01/15/2013 08:52

Lab File ID: P1200056.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	2.17	2.12	2.22
PCB-1016 Peak 2	2.57	2.52	2.62
PCB-1016 Peak 3	3.03	2.98	3.08
PCB-1016 Peak 4	3.17	3.12	3.22
PCB-1016 Peak 5	3.66	3.61	3.71
PCB-1260 Peak 1	5.00	4.95	5.05
PCB-1260 Peak 2	5.23	5.18	5.28
PCB-1260 Peak 3	5.60	5.55	5.65
PCB-1260 Peak 4	6.29	6.23	6.33
PCB-1260 Peak 5	6.67	6.61	6.71

FORM VIII
PCBS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Sample No.: CCV 240-79626/3 Date Analyzed: 03/27/2013 11:16

Instrument ID: A2HP12 GC Column: CLP-2 ID: 0.53(mm)

Lab File ID (Standard): P1200003.D Heated Purge: (Y/N) N

Calibration ID: 13229

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TCX	DCB	
				RT #	RT #	
CONTINUING CALIBRATION SURROGATE				1.70	7.90	
UPPER LIMIT				1.80	8.00	
LOWER LIMIT				1.60	7.80	
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-79626/3 CCVRT		03/27/2013 11:16	P1200003.D	1.70	7.90	
240-22125-1	MRC-MW62A-031813	03/27/2013 11:31	P1200004.D	1.70	7.90	
240-22125-2	MRC-MW62C-031813	03/27/2013 11:45	P1200005.D	1.70	7.90	
240-22125-3	MRC-MW43A-031813	03/27/2013 12:00	P1200006.D	1.71	7.90	
240-22125-4	MRC-MW44A-031813	03/27/2013 12:14	P1200007.D	1.70	7.90	
MB 240-79140/5-A		03/27/2013 12:28	P1200008.D	1.70	7.90	
LCS 240-79140/6-A		03/27/2013 12:43	P1200009.D	1.70	7.90	
CCV 240-79626/10		03/27/2013 12:57	P1200010.D	1.70	7.90	

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

TCX RT Limit = ± 0.1 minutes of surrogate RT
DCB RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8082

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCV 240-79626/3 Calibration Date: 03/27/2013 11:16

Instrument ID: A2HP12 Calib Start Date: 01/15/2013 07:41

GC Column: CLP-2 ID: 0.53(mm) Calib End Date: 01/15/2013 08:52

Lab File ID: P1200003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	40336278	42465092		0.526	0.500	5.3	15.0
PCB-1016 Peak 2	Ave	77532323	81520116		0.526	0.500	5.1	15.0
PCB-1016 Peak 3	Ave	155314599	168944614		0.544	0.500	8.8	15.0
PCB-1016 Peak 4	Ave	69508248	73079944		0.526	0.500	5.1	15.0
PCB-1016 Peak 5	Ave	54357446	56200534		0.517	0.500	3.4	15.0
PCB-1260 Peak 1	Ave	105960922	112673690		0.532	0.500	6.3	15.0
PCB-1260 Peak 2	Lin1		121845530		0.564	0.500	12.8	15.0
PCB-1260 Peak 3	Ave	172684383	194853452		0.564	0.500	12.8	15.0
PCB-1260 Peak 4	Ave	186794697	223715200		0.599	0.500	19.8*	15.0
PCB-1260 Peak 5	Ave	138607347	156346712		0.564	0.500	12.8	15.0
Tetrachloro-m-xylene	Ave	2345630717	2593635280		0.0276	0.0250	10.6	15.0
DCB Decachlorobipheny1	Ave	1923157597	2113839000		0.0275	0.0250	9.9	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCV 240-79626/3 Calibration Date: 03/27/2013 11:16

Instrument ID: A2HP12 Calib Start Date: 01/15/2013 07:41

GC Column: CLP-2 ID: 0.53(mm) Calib End Date: 01/15/2013 08:52

Lab File ID: P1200003.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	2.17	2.12	2.22
PCB-1016 Peak 2	2.57	2.52	2.62
PCB-1016 Peak 3	3.03	2.98	3.08
PCB-1016 Peak 4	3.17	3.12	3.22
PCB-1016 Peak 5	3.66	3.61	3.71
PCB-1260 Peak 1	5.00	4.95	5.05
PCB-1260 Peak 2	5.23	5.18	5.28
PCB-1260 Peak 3	5.60	5.55	5.65
PCB-1260 Peak 4	6.28	6.23	6.33
PCB-1260 Peak 5	6.67	6.62	6.72
Tetrachloro-m-xylene	1.70	1.65	1.75
DCB Decachlorobiphenyl	7.90	7.85	7.95

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCV 240-79626/10 Calibration Date: 03/27/2013 12:57

Instrument ID: A2HP12 Calib Start Date: 01/15/2013 07:41

GC Column: CLP-2 ID: 0.53(mm) Calib End Date: 01/15/2013 08:52

Lab File ID: P1200010.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	40336278	42180498		0.523	0.500	4.6	15.0
PCB-1016 Peak 2	Ave	77532323	80970056		0.522	0.500	4.4	15.0
PCB-1016 Peak 3	Ave	155314599	170855566		0.550	0.500	10.0	15.0
PCB-1016 Peak 4	Ave	69508248	73039796		0.525	0.500	5.1	15.0
PCB-1016 Peak 5	Ave	54357446	56106994		0.516	0.500	3.2	15.0
PCB-1260 Peak 1	Ave	105960922	114387280		0.540	0.500	8.0	15.0
PCB-1260 Peak 2	Lin1		132060810		0.615	0.500	22.9*	15.0
PCB-1260 Peak 3	Ave	172684383	202738598		0.587	0.500	17.4*	15.0
PCB-1260 Peak 4	Ave	186794697	239611172		0.641	0.500	28.3*	15.0
PCB-1260 Peak 5	Ave	138607347	169463572		0.611	0.500	22.3*	15.0
Tetrachloro-m-xylene	Ave	2345630717	2587580360		0.0276	0.0250	10.3	15.0
DCB Decachlorobiphenyl	Ave	1923157597	2390159720		0.0311	0.0250	24.3*	15.0

AVG 19.9 %

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: CCV 240-79626/10 Calibration Date: 03/27/2013 12:57

Instrument ID: A2HP12 Calib Start Date: 01/15/2013 07:41

GC Column: CLP-2 ID: 0.53(mm) Calib End Date: 01/15/2013 08:52

Lab File ID: P1200010.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	2.17	2.12	2.22
PCB-1016 Peak 2	2.57	2.52	2.62
PCB-1016 Peak 3	3.03	2.98	3.08
PCB-1016 Peak 4	3.17	3.12	3.22
PCB-1016 Peak 5	3.66	3.61	3.71
PCB-1260 Peak 1	5.00	4.95	5.05
PCB-1260 Peak 2	5.23	5.18	5.28
PCB-1260 Peak 3	5.60	5.55	5.65
PCB-1260 Peak 4	6.28	6.23	6.33
PCB-1260 Peak 5	6.67	6.62	6.72
Tetrachloro-m-xylene	1.70	1.65	1.75
DCB Decachlorobiphenyl	7.90	7.85	7.95

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: MB 240-79140/5-A

Matrix: Water Date Extracted: 03/22/2013 10:34

Lab File ID:(1) P1200008.D Lab File ID:(2)

Date Analyzed:(1) 03/27/2013 12:28 Date Analyzed:(2)

Instrument ID:(1) A2HP12 Instrument ID:(2)

GC Column:(1) CLP-2 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MRC-MW62A-031813	240-22125-1	03/27/2013 11:31	
MRC-MW62C-031813	240-22125-2	03/27/2013 11:45	
MRC-MW43A-031813	240-22125-3	03/27/2013 12:00	
MRC-MW44A-031813	240-22125-4	03/27/2013 12:14	
	LCS 240-79140/6-A	03/27/2013 12:43	

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79140/5-A

Matrix: Water | Lab File ID: P1200008.D

Analysis Method: 8082 | Date Collected:

Extraction Method: 3520C | Date Extracted: 03/22/2013 10:34

Sample wt/vol: 1000(mL) | Date Analyzed: 03/27/2013 12:28

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-2 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79626 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	1.0	U	1.0	0.17
11104-28-2	Aroclor 1221	1.0	U	1.0	0.13
11141-16-5	Aroclor 1232	1.0	U	1.0	0.16
53469-21-9	Aroclor 1242	1.0	U	1.0	0.22
12672-29-6	Aroclor 1248	1.0	U	1.0	0.10
11097-69-1	Aroclor 1254	1.0	U	1.0	0.16
11096-82-5	Aroclor 1260	1.0	U	1.0	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	76		23-136
2051-24-3	DCB Decachlorobiphenyl	104		10-130

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P1200009.D

Lab ID: LCS 240-79140/6-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Aroclor 1016	5.00	4.99	100	66-120	
Aroclor 1260	5.00	5.56	111	55-120	

Column to be used to flag recovery and RPD values

FORM III 8082

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): CLP-2 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCB1 #
MRC-MW62A-031813	240-22125-1	67	42
MRC-MW62C-031813	240-22125-2	74	34
MRC-MW43A-031813	240-22125-3	195 X	50
MRC-MW44A-031813	240-22125-4	75	17
	MB 240-79140/5-A	76	104
	LCS 240-79140/6-A	85	106

	QC LIMITS
TCX = Tetrachloro-m-xylene	23-136
DCB = DCB Decachlorobiphenyl	10-130

Column to be used to flag recovery values

FORM II 8082

VOC CALCULATION

	SAMPLE		
	MRC-MW76B-031813		
TARGET ANALYTE	trichloroethene		
ANALYTE RESPONSE	843288		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1745399		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.2589		
DILUTION FACTOR (DF)	1		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	18.66	µg/L

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW76B-031813 | Lab Sample ID: 240-22125-6

Matrix: Water | Lab File ID: UXM7029.D

Analysis Method: 8260B | Date Collected: 03/18/2013 12:17

Sample wt/vol: 5(mL) | Date Analyzed: 03/26/2013 16:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79501 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	19		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

Report Date: 01-Apr-2013 17:38:31 Chrom Revision: 2.0 01-Feb-2013 10:03:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20130326-18272.b\UXM7029.D		
Lims ID:	240-22125-B-6	Client ID:	MRC-MW76B-031813
Inject. Date:	26-Mar-2013 16:06:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018272-009		
Misc. Info.:	M30326A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Purge Vol:	5.000 mL	ALS Bottle#:	9
Lims Batch ID:	79501	Lims Sample ID:	9
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20130326-18272.b\8260_16.m		
Last Update:	27-Mar-2013 10:17:51	Calib Date:	07-Feb-2013 15:20:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20130207-17203.b\UXM6223.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK031		

First Level Reviewer: stillert Date: 01-Apr-2013 17:38:31

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.702	5.701	0.001	97	1745399	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.393	0.001	93	1130732	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	489729	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.121	5.109	0.012	55	382524	9.04	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	672575	9.37	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	96	1671504	9.00	
$ 8 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	77	535578	8.39	
14 Dichlorodifluoromethane	85		1.646					
15 Chloromethane	50		1.836					9
16 Vinyl chloride	62		1.954					9
17 Bromomethane	94		2.298					
18 Chloroethane	64		2.381					9
20 Trichlorofluoromethane	101		2.654					
24 1,1-Dichloroethene	96	3.152	3.152	0.0	83	66940	1.29	
26 Acetone	43		3.176					
25 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
28 Carbon disulfide	76		3.354					9
32 Methylene Chloride	84		3.579					
33 2-Methyl-2-propanol	59		3.674					
35 trans-1,2-Dichloroethene	96		3.840					
36 Methyl tert-butyl ether	73		3.840					9
38 1,1-Dichloroethane	63	4.208	4.208	0.0	86	246318	1.94	
39 Vinyl acetate	86		4.243					
40 Isopropyl ether	87		4.278					9
42 Tert-butyl ethyl ether	59		4.587					9
45 2-Butanone (MEK)	43		4.706					9
43 cis-1,2-Dichloroethene	96	4.717	4.706	0.011	86	119541	1.96	
44 2,2-Dichloropropane	77		4.717					9
49 Chlorobromomethane	128		4.919					
51 Chloroform	83		4.978					9

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
52 1,1,1-Trichloroethane	97		5.156					
54 1,1-Dichloropropene	75		5.299					
55 Carbon tetrachloride	117		5.310					
57 1,2-Dichloroethane	62		5.476					
58 Benzene	78	5.476	5.476	0.0	89	44517	0.1675	
59 Tert-amyl methyl ether	73		5.559					
63 Trichloroethene	130	6.022	6.022	0.0	88	843288	18.7	
65 1,2-Dichloropropane	63		6.212					
67 Dibromomethane	93		6.307					
69 Dichlorobromomethane	83		6.437					
71 2-Chloroethyl vinyl ether	63		6.686					
72 cis-1,3-Dichloropropene	75		6.828					9
73 4-Methyl-2-pentanone (MIBK)	43		6.947					
74 Toluene	91		7.137					9
75 trans-1,3-Dichloropropene	75		7.314					9
78 1,3-Dichloropropane	76		7.635					
79 Tetrachloroethene	164	7.646	7.647	-0.001	75	7701	0.2699	
80 2-Hexanone	43		7.694					9
83 Chlorodibromomethane	129		7.848					
85 Ethylene Dibromide	107		7.967					
86 Chlorobenzene	112		8.417					9
87 1,1,1,2-Tetrachloroethane	131		8.488					
88 Ethylbenzene	106		8.524					
89 m-Xylene & p-Xylene	106		8.631					
90 Styrene	104		9.010					
91 o-Xylene	106		9.010					
92 Bromoform	173		9.188					
93 Isopropylbenzene	105		9.354					9
96 1,1,2,2-Tetrachloroethane	83		9.615					
97 Bromobenzene	156		9.662					
98 1,2,3-Trichloropropane	110		9.674					
100 N-Propylbenzene	120		9.757					
101 2-Chlorotoluene	126		9.840					
103 4-Chlorotoluene	126		9.947					
104 tert-Butylbenzene	119		10.244					
105 1,2,4-Trimethylbenzene	105		10.291					9
106 sec-Butylbenzene	105		10.457					9
107 1,3-Dichlorobenzene	146		10.576					9
108 4-Isopropyltoluene	119		10.599					9
109 1,4-Dichlorobenzene	146		10.659					9
110 1,2,3-Trimethylbenzene	105		10.706					
111 n-Butylbenzene	91		11.002					9
112 1,2-Dichlorobenzene	146		11.026					9
113 1,2-Dibromo-3-Chloropropane	157		11.797					
115 1,2,4-Trichlorobenzene	180		12.639					
116 Hexachlorobutadiene	225		12.805					
117 Naphthalene	128		12.888					9
118 1,2,3-Trichlorobenzene	180		13.149					9
S 123 Xylenes, Total	106		16.530					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.2524		1.00	0.0100	27.4	50.0
Chloromethane	Ave	0.4718	0.4832	0.1000	1.00	0.0100	2.4	50.0
Vinyl chloride	Ave	0.4464	0.4783		1.00	0.0100	7.1	20.0
Bromomethane	Lin1		0.1130		1.00	0.0100	-5.4	50.0
Chloroethane	Ave	0.2699	0.2696		1.00	0.0100	-0.1	50.0
Trichlorofluoromethane	Ave	0.1799	0.2258		1.00	0.0100	25.5	50.0
Acrolein	Ave	0.0650	0.0737		20.0	0.0300	13.4	50.0
1,1-Dichloroethene	Ave	0.2978	0.2814		1.00	0.0100	-5.5	20.0
1,1,2-Trichloro-1,2,2-trichf luoroethane	Ave	0.1196	0.1469		1.00	0.0100	22.9	50.0
Acetone	Ave	0.1320	0.1147		10.0	0.0200	-13.1	50.0
Iodomethane	Ave	0.3309	0.3093		1.00	0.0100	-6.5	50.0
Carbon disulfide	Ave	0.9836	0.8873		1.00	0.0100	-9.8	50.0
Acetonitrile	Ave	0.0436	0.0440		20.0	0.0300	1.1	50.0
Methyl acetate	Ave	0.3070	0.2874		10.0	0.0100	-6.4	50.0
Methylene Chloride	Ave	0.3987	0.3316		1.00	0.0100	-16.8	50.0
tert-Butyl alcohol	Ave	0.0180	0.0180		50.0	0.200	0.4	50.0
Acrylonitrile	Ave	0.1462	0.1386		20.0	0.0300	-5.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8619		1.00	0.0100	-9.0	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3069		1.00	0.0100	-8.7	50.0
Hexane	Ave	0.0703	0.0802		1.00	0.0100	14.1	20.0
1,1-Dichloroethane	Ave	0.7266	0.6707	0.1000	1.00	0.0100	-7.7	50.0
Vinyl acetate	Ave	0.0560	0.0587		2.00	0.0100	4.8	50.0
2-Butanone	Ave	0.1677	0.1588		10.0	0.0200	-5.3	50.0
2,2-Dichloropropane	Ave	0.3066	0.2711		1.00	0.0100	-11.6	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3183		1.00	0.0100	-8.8	50.0
Bromochloromethane	Ave	0.1319	0.1204		1.00	0.0100	-8.7	50.0
Tetrahydrofuran	Lin1		0.1040		5.00	0.0100	-7.0	50.0
Chloroform	Ave	0.5879	0.5420		1.00	0.0100	-7.8	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3399		1.00	0.0100	-8.1	50.0
Cyclohexane	Ave	0.6611	0.6987		1.00	0.0100	5.7	50.0
1,1-Dichloropropene	Ave	0.4918	0.4846		1.00	0.0100	-1.5	50.0
Carbon tetrachloride	Ave	0.2374	0.2244		1.00	0.0100	-5.5	50.0
1,2-Dichloroethane	Ave	0.5192	0.4963		1.00	0.0100	-4.4	50.0
Benzene	Ave	1.523	1.401		1.00	0.0100	-8.0	50.0
Trichloroethene	Ave	0.2589	0.2498		1.00	0.0100	-3.5	50.0
1,2-Dichloropropane	Ave	0.3704	0.3538		1.00	0.0100	-4.5	20.0
Methylcyclohexane	Ave	0.4566	0.5013		1.00	0.0100	9.8	50.0
Dibromomethane	Ave	0.1666	0.1629		1.00	0.0100	-2.2	50.0
Bromodichloromethane	Ave	0.3405	0.3196		1.00	0.0100	-6.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.1380		10.0	0.0100	-12.1	50.0

SVOC CALCULATION LIQUIDS	**SAMPLE MRC-MW44A-031813**		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	53225		
INTERNAL STANDARD	1,4-DICHLOROBENZENE-D4		
I.S. RESPONSE	260073		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.6794		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1000	ml	
DILUTION FACTOR (DF)	1		
INJECTION VOLUME - VOL inj.	0.001	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final / (I.S. RESPONSE) X (CAL. RRF) X (vol. initial)	=	2.4098	ng/ml or ug/l

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22125-1

SDG No.:

Client Sample ID: MRC-MW44A-031813 | Lab Sample ID: 240-22125-4

Matrix: Water | Lab File ID: 0326022.D

Analysis Method: 8270D | Date Collected: 03/18/2013 14:50

Extract. Method: 3520C | Date Extracted: 03/21/2013 09:26

Sample wt/vol: 1000(mL) | Date Analyzed: 03/26/2013 23:19

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 79522 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	2.4		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		20-110
367-12-4	2-Fluorophenol (Surr)	53		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	54		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	63		21-110
4165-62-2	Phenol-d5 (Surr)	52		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

Report Date: 27-Mar-2013 08:29:43 Chrom Revision: 2.0 01-Feb-2013 10:03:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4AG2\20130326-18274.b\0326022.D		
Lims ID:	240-22125-B-4-A	Client ID:	MRC-MW44A-031813
Inject. Date:	26-Mar-2013 23:19:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018274-022		
Misc. Info.:	240-22125-B-4-A =240-22125-B-4-A		
Operator:		Instrument ID:	A4AG2
Injection Vol:	1.0 ul	ALS Bottle#:	22
Lims Batch ID:	79522	Lims Sample ID:	22
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20130326-18274.b\8270 ag2.m		
Last Update:	27-Mar-2013 08:29:32	Calib Date:	12-Mar-2013 13:52:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20130312-17914.b\0312019.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK027		

First Level Reviewer: hulat Date: 27-Mar-2013 08:23:33

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.081	6.081	0.0	96	260073	4.00	
* 2 Naphthalene-d8	136	7.199	7.205	-0.006	100	1025854	4.00	
* 3 Acenaphthene-d10	164	8.702	8.702	0.0	92	613028	4.00	
* 4 Phenanthrene-d10	188	9.970	9.970	0.0	97	1087232	4.00	
* 5 Chrysene-d12	240	12.601	12.607	-0.006	97	1115985	4.00	
* 6 Perylene-d12	264	14.751	14.752	-0.001	97	967671	4.00	
$ 7 2-Fluorophenol	112	4.824	4.824	0.0	90	798629	7.97	
$ 8 Phenol-d5	99	5.723	5.723	0.0	99	1042851	7.77	
$ 9 Nitrobenzene-d5	82	6.568	6.568	0.0	86	613929	6.26	
$ 10 2-Fluorobiphenyl (Surr)	172	8.108	8.108	0.0	99	1183152	6.01	
$ 11 2,4,6-Tribromophenol	330	9.371	9.371	0.0	90	224889	8.12	
$ 12 Terphenyl-d14	244	11.350	11.350	0.0	99	1092448	5.84	
26 1,4-Dioxane	88	2.605	2.599	0.006	88	53225	1.20	

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22125-1

SDG No.:

Lab Sample ID: STD6 240-79268/2 Calibration Date: 03/25/2013 07:42

Instrument ID: A4AG2 Calib Start Date: 03/12/2013 07:40

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/12/2013 10:35

Lab File ID: 0325002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6794	0.5839		8.60	10.0	-14.0	20.0
N-Nitrosodimethylamine	Ave	0.8719	0.7684		8.81	10.0	-11.9	20.0
Pyridine	Ave	1.518	1.344		8.85	10.0	-11.5	20.0
Benzaldehyde	Ave	1.028	0.9389	0.0100	9.13	10.0	-8.7	20.0
Phenol	Ave	2.184	2.039	0.8000	9.34	10.0	-6.6	20.0
Aniline	Ave	2.385	2.171		9.10	10.0	-9.0	20.0
Bis(2-chloroethyl)ether	Ave	1.436	1.321	0.7000	9.20	10.0	-8.0	20.0
2-Chlorophenol	Ave	1.723	1.659	0.8000	9.63	10.0	-3.7	20.0
1,3-Dichlorobenzene	Ave	1.514	1.449		9.57	10.0	-4.3	20.0
1,4-Dichlorobenzene	Ave	1.865	1.799		9.65	10.0	-3.5	20.0
Benzyl alcohol	Ave	1.097	0.9605		8.76	10.0	-12.4	20.0
1,2-Dichlorobenzene	Ave	1.436	1.379		9.60	10.0	-4.0	20.0
2-Methylphenol	Ave	1.633	1.541	0.7000	9.44	10.0	-5.6	20.0
bis (2-chloroisopropyl) ether	Ave	1.484	1.315		8.86	10.0	-11.4	20.0
3 & 4 Methylphenol	Ave	1.685	1.598		9.48	10.0	-5.2	20.0
N-Nitrosodi-n-propylamine	Ave	1.058	0.9637	0.5000	9.10	10.0	-9.0	20.0
Acetophenone	Ave	1.880	1.818	0.0100	9.67	10.0	-3.3	20.0
Hexachloroethane	Ave	0.5990	0.5718	0.3000	9.55	10.0	-4.5	20.0
Nitrobenzene	Ave	0.3883	0.3572	0.2000	9.20	10.0	-8.0	20.0
Isophorone	Ave	0.6714	0.6269	0.4000	9.34	10.0	-6.6	20.0
2-Nitrophenol	Ave	0.2038	0.2250	0.1000	11.0	10.0	10.4	20.0
2,4-Dimethylphenol	Ave	0.4608	0.4324	0.2000	9.38	10.0	-6.2	20.0
Benzoic acid	Qua		0.1807		16.3	20.0	-18.5	20.0
Bis(2-chloroethoxy)methane	Ave	0.4436	0.4042	0.3000	9.11	10.0	-8.9	20.0
2,4-Dichlorophenol	Ave	0.3208	0.3285	0.2000	10.2	10.0	2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3069	0.3060		9.97	10.0	-0.3	20.0
Naphthalene	Ave	1.017	0.9411	0.7000	9.25	10.0	-7.5	20.0
4-Chloroaniline	Ave	0.4629	0.4536	0.0100	9.80	10.0	-2.0	20.0
Hexachlorobutadiene	Ave	0.1568	0.1570	0.0100	10.0	10.0	0.1	20.0
Caprolactam	Ave	0.0852	0.1002	0.0100	11.8	10.0	17.6	20.0
4-Chloro-3-methylphenol	Ave	0.3755	0.3802	0.2000	10.1	10.0	1.2	20.0
2-Methylnaphthalene	Ave	0.6441	0.6286	0.4000	9.76	10.0	-2.4	20.0
1-Methylnaphthalene	Ave	0.6259	0.6008		9.60	10.0	-4.0	20.0
Hexachlorocyclopentadiene	Qua		0.2304	0.0500	8.50	10.0	-15.0	20.0
2,4,6-Trichlorophenol	Ave	0.3772	0.3978	0.2000	10.5	10.0	5.4	20.0
2,4,5-Trichlorophenol	Ave	0.4137	0.4179	0.2000	10.1	10.0	1.0	20.0
1,1'-Biphenyl	Ave	1.397	1.311	0.0100	9.39	10.0	-6.1	20.0
2-Chloronaphthalene	Ave	1.086	1.037	0.8000	9.54	10.0	-4.6	20.0
2-Nitroaniline	Ave	0.3506	0.3312	0.0100	9.45	10.0	-5.5	20.0
Dimethyl phthalate	Ave	1.158	1.147	0.0100	9.91	10.0	-0.9	20.0

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **April 12, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- SELECT METALS**
LOCKHEED-MIDDLE RIVER COMPLEX
SDG 240-22125-1

SAMPLES: 5/Aqueous/

MRC-MW62A-031813	MRC-MW62C-031813
MRC-MW76A-031813	MRC-MW76B-031813
MRC-MW78B-031813	

Overview

The sample set for Lockheed MRC, SDG 240-22125-1, consists of five (5) aqueous environmental samples. This SDG contained no field duplicate pairs.

All samples were analyzed for select metals. The samples were collected by Tetra Tech on March 18th, 2013 and analyzed by TestAmerica. Metals analyses were conducted using methods 6020. Mercury analyses were conducted using method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, laboratory control sample recoveries, matrix spike recoveries, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in method and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Copper [1]	0.52 ug/L	2.6 ug/L
Molybdenum [1]	0.26 ug/L	1.3 ug/L
Antimony [2]	0.34 ug/L	1.7 ug/L

[1] Maximum concentration found in a preparation blank affecting all samples.
[2] Maximum concentration found in a calibration blank affecting all samples.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for

blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

Notes

Positive results greater than MDL but less than the RL were qualified as estimated (J).

Form 1s had non-detected results reported to the reporting limit (RL). The validator changed the non-detected results to be reported at the method detection limit (MDL).

The CRDL standard analyzed on 4/2/13 had percent recoveries > 110% for antimony, copper, cobalt, silver, nickel and a percent recovery < 80% for zinc. All samples were affected. No other validation action was warranted as sample results were either qualified for blank contamination or were greater than 2X CRDL.

No batch QC was provided for this SDG.

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted on the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993).

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW62A-031813			MRC-MW62C-031813			MRC-MW76A-031813			MRC-MW76B-031813		
SDG: 240-22125-1	LAB_ID	240-22125-1			240-22125-2			240-22125-5			240-22125-6		
FRACTION: M	SAMP_DATE	3/18/2013			3/18/2013			3/18/2013			3/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U		0.3	U	
ARSENIC		0.9	U		2	J	P	0.9	U		0.9	U	
BARIUM		44			120			110			100		
BERYLLIUM		6.1			0.59	J	P	23			0.52	J	P
CADMIUM		0.1	U		0.1	U		0.51	J	P	0.1	U	
CHROMIUM		1.1	J	P	4.9			0.9	U		0.9	U	
COBALT		22			82			560			63		
COPPER		1.9	B	A	2	B	A	1.4	B	A	0.5	U	
LEAD		0.2	U		0.27	J	P	0.2	U		0.2	U	
MERCURY		0.1	U		0.1	U		0.1	U		0.1	U	
MOLYBDENUM		0.41	B	A	0.2	B	A	0.2	U		0.2	U	
NICKEL		110			110			490			93		
SELENIUM		0.5	U		0.5	U		0.71	J	P	0.5	U	
SILVER		0.1	U		0.1	U		0.1	U		0.1	U	
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		0.8	U		0.8	U		0.8	U		0.8	U	
ZINC		89			69			480			130		

PROJ_NO: 04795	NSAMPLE	MRC-MW78B-031813
SDG: 240-22125-1	LAB_ID	240-22125-7
FRACTION: M	SAMP_DATE	3/18/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
ANTIMONY	0.77	B	A
ARSENIC	1	J	P
BARIUM	83		
BERYLLIUM	0.1	U	
CADMIUM	0.14	J	P
CHROMIUM	0.9	U	
COBALT	39		
COPPER	2.3	B	A
LEAD	0.2	U	
MERCURY	0.1	U	
MOLYBDENUM	0.91	B	A
NICKEL	14		
SELENIUM	0.5	U	
SILVER	0.1	U	
THALLIUM	0.2	U	
VANADIUM	1.2	J	P
ZINC	100		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW62A-031813 Lab Sample ID: 240-22125-1

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 10:40

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW62C-031813 Lab Sample ID: 240-22125-2

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 12:00

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW76A-031813 Lab Sample ID: 240-22125-5

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 10:50

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW76B-031813 Lab Sample ID: 240-22125-6

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 12:17

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW78B-031813 Lab Sample ID: 240-22125-7

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 15:10

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW62A-031813 Lab Sample ID: 240-22125-1

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 10:40

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	6.1	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	44	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.1	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	1.9	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	110	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	22	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	89	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.41	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW62C-031813 Lab Sample ID: 240-22125-2

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 12:00

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	2.0	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	0.59	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	120	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	4.9	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	110	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.27	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	82	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	69	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.20	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW76A-031813 Lab Sample ID: 240-22125-5

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 10:50

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	23	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.51	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	110	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.4	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	490	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	0.71	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	560	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	480	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW76B-031813 Lab Sample ID: 240-22125-6

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 12:17

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.52	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	100	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	93	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	63	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	130	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW78B-031813 Lab Sample ID: 240-22125-7

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG ID.:

Matrix: Water Date Sampled: 03/18/2013 15:10

Reporting Basis: WET Date Received: 03/19/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.77	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	1.0	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	0.14	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	83	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.3	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	14	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	39	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	100	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.91	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	1.2	20	0.80	ug/L	J		1	6020

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stv Cameron	Lab Contact:	COC No: 009426
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (in BUSdays)		
Phone: (301) 528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC Gw Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04795-02	Shipping/Tracking No:			

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C)/ Grab (G)	Analyses: Total Metals	PCBs	1,4-Dioxane	VOCs	Sample Specific Notes / Special Instructions:
MRC-MW62A-031813	3/18/13	1040		X					1				2		N	G	X	X			
MRC-MW62C-031813		1200		X					1				2		N	G	X	X			
MRC-MW43A-031813		1330		X									2		N	G		X			Emits Odor
MRC-MW44A-031813		1450		X									4		N	G		X	X		
MRC-MW76A-031813		1050		X					1	3					N	G	X			X	
MRC-MW76B-031813		1217		X					1	3					N	G	X			X	
MRC-MW78B-031813		1510		X					1	3					N	G	X			X	
MRC-MW87A-031813	↓	1600		X						3					N	G				X	
TB-031813	—	—		X						2					N	G				X	

240-22125 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 mon
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3-18-13/1610		TestAmerica	3-18-2013/1610
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	3-18-2013/1655			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			Dwight D. Green	TA	3-19-13 945

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TAL 0018-1 (04/10)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling

Report Number: 240-22125-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Total Recoverable Metals and the 7470A Total Mercury analyses were performed at the TestAmerica Irvine laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT
The samples were received on 03/19/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.8 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MRC-MW76A-031813 (240-22125-5), MRC-MW76B-031813 (240-22125-6), MRC-MW78B-031813 (240-22125-7), MRC-MW87A-031813 (240-22125-8) and TB-031813 (240-22125-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/26/2013.

Methylene Chloride was detected in method blank MB 240-79501/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Hexachlorobutadiene was detected in method blank MB 240-79501/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample(LCS) for batch 79501 exceeded control limits for the following analyte(s): Dichlorodifluoromethane and Trichlorofluoromethane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Sample MRC-MW44A-031813 (240-22125-4) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/21/2013 and analyzed on 03/26/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analysis. All quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)
Samples MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2), MRC-MW43A-031813 (240-22125-3) and

MRC-MW44A-031813 (240-22125-4) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 03/22/2013 and analyzed on 03/27/2013.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Tetrachloro-m-xylene failed the surrogate recovery criteria high for MRC-MW43A-031813 (240-22125-3).

The closing continuing calibration verification (CCV) associated with these samples passed average. Since the samples were ND, no corrective action is required. MRC-MW43A-031813 (240-22125-3), MRC-MW44A-031813 (240-22125-4), MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2)

Two surrogates are used for this analysis. The laboratory's SOP allows 1 of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: MRC-MW43A-031813 (240-22125-3). These results have been reported and qualified.

The following sample required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: (CCV 240-79626/3).

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 79140.

No other difficulties were encountered during the PCBs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2), MRC-MW76A-031813 (240-22125-5), MRC-MW76B-031813 (240-22125-6) and MRC-MW78B-031813 (240-22125-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/01/2013 and analyzed on 04/02/2013.

Copper and Molybdenum were detected in method blank MB 440-95414/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW62A-031813 (240-22125-1), MRC-MW62C-031813 (240-22125-2), MRC-MW76A-031813 (240-22125-5), MRC-MW76B-031813 (240-22125-6) and MRC-MW78B-031813 (240-22125-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 03/29/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Sample Report

MRC-MW76A-031813

Sample Table

Sample Name	240-22125-d-5-b
Data File Name	027SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1304
Acq Date Time	2013-04-02T10:02:32-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-95414 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

555.04 ug/L reported as 560 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	22.529	22.529	0.86	140858	0.77	3000	
Na	23	1	No Gas	94222.647	94222.647	0.16	3228039765	0.86	100000	>LDR
Mg	24	1	No Gas	23906.768	23906.768	0.33	547303463	1.11	112500	
Al	27	1	No Gas	177.209	177.209	0.47	5440385	1.25	4000	
K	39	1	No Gas	760.653	760.653	1.27	34022053	0.64	87500	
Ca	44	1	No Gas	2211.561	2211.561	0.67	2694860	0.16	225000	
V	51	1	No Gas	0.081	0.081	8.54	7494	5.32	4000	
Cr	52	1	No Gas	0.231	0.231	3.30	28822	1.92	4000	
Mn	55	1	No Gas	21491.903	21491.903	0.89	1204293712	0.35	4000	>LDR
Fe	56	1	No Gas	6179.457	6179.457	0.81	277681651	0.98	40000	
Co	59	1	No Gas	555.045	555.045	1.13	24739873	1.58	4000	
Ni	60	1	No Gas	488.969	488.969	0.28	5034521	1.06	4000	
Cu	65	1	No Gas	1.375	1.375	1.81	19588	1.85	4000	
Zn	66	1	No Gas	481.672	481.672	0.57	3184175	0.83	2500	
As	75	1	No Gas	0.212	0.212	59.58	1184	68.41	4000	
Se	82	1	No Gas	0.714	0.714	29.02	288	29.33	4000	
Sr	88	1	No Gas	85.058	85.058	2.75	4793173	1.08	4000	
Mo	95	1	No Gas	0.161	0.161	6.92	2025	8.24	4000	
[Mo]	98	1	No Gas	0.046	0.046	10.11	1188	8.52	4000	
Ag	107	1	No Gas	0.019	0.019	12.54	494	9.82	100	
Cd	111	1	No Gas	0.511	0.511	3.93	2877	5.82	4000	
[Cd]	114	1	No Gas	0.520	0.520	4.07	6083	3.41	4000	
Sn	118	1	No Gas	0.013	0.013	42.67	1039	9.97	4000	
Sb	123	1	No Gas	0.040	0.040	8.05	1205	5.40	4000	
Ba	137	1	No Gas	108.220	108.220	1.16	873668	0.90	4000	
Ce	140	1	No Gas	38.951	38.951	1.85	2786430	0.82	4000	
Tl	205	1	No Gas	0.029	0.029	14.98	1496	11.51	4000	
Pb	208	1	No Gas	0.174	0.174	2.38	12466	1.94	4000	
U	238	1	No Gas	0.084	0.084	2.42	5009	1.91	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	1220833	1.34	1336190	91.37	60	120	
Sc-45 (IS)	45	1	No Gas	3937243	0.78	3860647	101.98	60	120	
Ge (IS)	72	1	No Gas	810608	1.28	798006	101.58	60	120	
Ge (IS)	74	1	No Gas	1115890	0.97	1113827	100.19	60	120	
In-115 (IS)	115	1	No Gas	4678586	2.05	4632466	101.00	60	120	
Tb-159 (IS)	159	1	No Gas	6088700	0.67	5683169	107.14	60	120	

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22125

Client Tetra Tech Site Name _____ By: Mark D. Steen

Cooler Received on 3-14-13 Opened on 3-14-13 (Signature)

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt 3-14-13 3-14-13

IR GUN# 1 (CF –2 °C) Observed Sample Temp. 2.0 °C Corrected Sample Temp. 2.0 °C

IR GUN# 4G (CF 0 °C) Observed Sample Temp. 1.8 °C Corrected Sample Temp. 1.8 °C ☑ Multiple on Back

IR GUN# 5G (CF 0 °C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

IR GUN# 8 (CF 0 °C) Observed Sample Temp. _____ °C Corrected Sample Temp. _____ °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
62A	<2	3-19-13	JDG
62C	<2	"	"
76A	<2	"	"
76B	<2	"	"
78B	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client Cooler	1.8	1.8	46	Ice
1	2.0	2.0	1	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22125-1

Login Number: 22125
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/22/13 03:30 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-22082-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW30A-031513	240-22082-1	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	3/29/2013	3/29/2013	11	0	11
HG	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW31A-031513	240-22082-2	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
HG	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	3/29/2013	3/29/2013	14	0	14
M	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW30A-031513	240-22082-1	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW31A-031513	240-22082-2	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
M	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	4/1/2013	4/2/2013	14	1	15
M	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	4/1/2013	4/1/2013	17	0	17
OS	UG/L	MRC-MW44A-031813	240-22125-4	NM	3/18/2013	3/21/2013	3/26/2013	3	5	8
OV	UG/L	MRC-MW78B-031813	240-22125-7	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	TB-031813	240-22125-9	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	TB-031513	240-22082-5	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW87B-031513	240-22082-9	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW87A-031813	240-22125-8	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW86A-031513	240-22082-7	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW76B-031813	240-22125-6	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW76A-031813	240-22125-5	NM	3/18/2013	3/26/2013	3/26/2013	8	0	8
OV	UG/L	MRC-MW34A-031513	240-22082-6	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW33A-031513	240-22082-4	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW32A-031513	240-22082-3	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
OV	UG/L	MRC-MW86B-031513	240-22082-8	NM	3/15/2013	3/25/2013	3/25/2013	10	0	10
PCB	UG/L	MRC-MW62C-031813	240-22125-2	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW43A-031813	240-22125-3	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW44A-031813	240-22125-4	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9
PCB	UG/L	MRC-MW62A-031813	240-22125-1	NM	3/18/2013	3/22/2013	3/27/2013	4	5	9

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22125-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22125-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22125-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22125-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22125-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-94917/1-A	03/29/2013 10:56	94917		20	20
LCS 440-94917/2-A	03/29/2013 10:56	94917		20	20
240-22125-1	03/29/2013 10:56	94917		20	20
240-22125-2	03/29/2013 10:56	94917		20	20
240-22125-5	03/29/2013 10:56	94917		20	20
240-22125-6	03/29/2013 10:56	94917		20	20
240-22125-7	03/29/2013 10:56	94917		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-94917/1-A

Instrument Code: CV-HG2 Batch No.: 95140

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-94917/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00074

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.03		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 14:20

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-94935/6-A	1		12:52	X
IC 440-94935/7-A	1		12:55	X
IC 440-94935/8-A	1		12:57	X
IC 440-94935/9-A	1		12:59	X
IC 440-94935/10-A	1		13:02	X
IC 440-94935/11-A	1		13:04	X
ICV 440-94935/1-A	1		13:07	X
ICB 440-94935/2-A	1		13:09	X
CRA 440-94935/5-A	1		13:12	X
ZZZZZZ			13:14	
ZZZZZZ			13:17	
ZZZZZZ			13:19	
ZZZZZZ			13:22	
ZZZZZZ			13:24	
ZZZZZZ			13:27	
CCV 440-94935/3-A	1		13:29	X
CCB 440-94935/4-A	1		13:32	X
MB 440-94917/1-A	1	T	13:34	X
LCS 440-94917/2-A	1	T	13:37	X
ZZZZZZ			13:39	
ZZZZZZ			13:41	
ZZZZZZ			13:44	
ZZZZZZ			13:46	
CCV 440-94935/3-A	1		13:48	X
CCB 440-94935/4-A	1		13:51	X
ZZZZZZ			13:54	
ZZZZZZ			13:56	
ZZZZZZ			13:59	
ZZZZZZ			14:01	
ZZZZZZ			14:04	
ZZZZZZ			14:06	
ZZZZZZ			14:08	
ZZZZZZ			14:11	
ZZZZZZ			14:13	
ZZZZZZ			14:16	
CCV 440-94935/3-A			14:18	
CCB 440-94935/4-A			14:20	

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

ICV Source: ME 1PPM HG2_00072 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00074

Analyte	ICV 440-94935/1-A 03/29/2013 13:07				CCV 440-94935/3-A 03/29/2013 13:29				CCV 440-94935/3-A 03/29/2013 13:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.15		8.00	102	4.21		4.00	105	4.16		4.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-94935/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.214		107	50-150

Lab Sample ID: CRA 440-94935/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.214		107	50-150

Lab Sample ID: CRA 440-94935/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00074

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.209		104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-94935/2-A 03/29/2013 13:09		CCB 440-94935/4-A 03/29/2013 13:32		CCB 440-94935/4-A 03/29/2013 13:51			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 18:02

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-94935/6-A	1		12:52	X
IC 440-94935/7-A	1		12:55	X
IC 440-94935/8-A	1		12:57	X
IC 440-94935/9-A	1		12:59	X
IC 440-94935/10-A	1		13:02	X
IC 440-94935/11-A	1		13:04	X
ICV 440-94935/1-A	1		13:07	X
ICB 440-94935/2-A	1		13:09	X
CRA 440-94935/5-A	1		13:12	X
CCV 440-94935/3-A			13:29	
CCB 440-94935/4-A			13:32	
CCV 440-94935/3-A			13:48	
CCB 440-94935/4-A			13:51	
CCV 440-94935/3-A			14:18	
CCB 440-94935/4-A			14:20	
CCV 440-94935/3-A			15:01	
CCB 440-94935/4-A			15:04	
CCV 440-94935/3-A	1		15:25	X
CCB 440-94935/4-A	1		15:28	X
ZZZZZZ			15:30	
ZZZZZZ			15:33	
ZZZZZZ			15:35	
ZZZZZZ			15:38	
ZZZZZZ			15:40	
ZZZZZZ			15:43	
ZZZZZZ			15:45	
240-22125-1	1	T	15:47	X
240-22125-2	1	T	15:50	X
CCV 440-94935/3-A	1		15:52	X
CCB 440-94935/4-A	1		15:55	X
240-22125-5	1	T	15:57	X
240-22125-6	1	T	16:00	X
240-22125-7	1	T	16:02	X
ZZZZZZ			16:05	
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:14	
ZZZZZZ			16:17	
CCV 440-94935/3-A	1		16:19	X
CCB 440-94935/4-A	1		16:22	X
ZZZZZZ			16:24	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 18:02

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			16:27	
ZZZZZZ			16:29	
ZZZZZZ			16:32	
ZZZZZZ			16:34	
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:41	
CCV 440-94935/3-A			16:44	
CCB 440-94935/4-A			16:46	
ZZZZZZ			16:49	
ZZZZZZ			16:51	
ZZZZZZ			16:54	
ZZZZZZ			16:56	
ZZZZZZ			16:59	
ZZZZZZ			17:01	
ZZZZZZ			17:04	
ZZZZZZ			17:06	
ZZZZZZ			17:08	
CCV 440-94935/3-A			17:11	
CCB 440-94935/4-A			17:13	
ZZZZZZ			17:16	
ZZZZZZ			17:18	
ZZZZZZ			17:21	
ZZZZZZ			17:23	
ZZZZZZ			17:26	
ZZZZZZ			17:28	
ZZZZZZ			17:30	
ZZZZZZ			17:33	
CCV 440-94935/3-A			17:35	
CCB 440-94935/4-A			17:38	
ZZZZZZ			17:40	
ZZZZZZ			17:43	
ZZZZZZ			17:45	
ZZZZZZ			17:48	
ZZZZZZ			17:50	
ZZZZZZ			17:52	
ZZZZZZ			17:55	
CCV 440-94935/3-A			17:57	
CCB 440-94935/4-A			18:00	
CRA 440-94935/5-A	1		18:02	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 03/29/2013 12:52 End Date: 03/29/2013 18:02

Lab Sample Id	D/F	Type	Time	Analytes																										
				Hg																										

Prep Types:
T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

ICV Source: ME 1PPM HG2_00072 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00074

Analyte	ICV 440-94935/1-A 03/29/2013 13:07				CCV 440-94935/3-A 03/29/2013 15:25				CCV 440-94935/3-A 03/29/2013 15:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.15		8.00	102	4.16		4.00	104	4.16		4.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

ICV Source: ME 1PPM HG2_00072 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00074

Analyte	CCV 440-94935/3-A 03/29/2013 16:19											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.15		4.00	104								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-94935/2-A 03/29/2013 13:09		CCB 440-94935/4-A 03/29/2013 15:28		CCB 440-94935/4-A 03/29/2013 15:55		CCB 440-94935/4-A 03/29/2013 16:22	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-95414/1-A	04/01/2013 14:05	95414		50	50
LCS 440-95414/2-A	04/01/2013 14:05	95414		50	50
240-22125-1	04/01/2013 14:05	95414		50	50
240-22125-2	04/01/2013 14:05	95414		50	50
240-22125-5	04/01/2013 14:05	95414		50	50
240-22125-6	04/01/2013 14:05	95414		50	50
240-22125-7	04/01/2013 14:05	95414		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-95414/1-A

Instrument Code: ICPMS5 Batch No.: 95570

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.526	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	0.267	J		6020
7440-62-2	Vanadium	20	U		6020

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-95414/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00015

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	80.6		101	80	120		6020
Arsenic	80.0	80.3		100	80	120		6020
Beryllium	80.0	82.0		103	80	120		6020
Cadmium	80.0	80.4		100	80	120		6020
Barium	80.0	80.7		101	80	120		6020
Chromium	80.0	80.6		101	80	120		6020
Copper	80.0	81.3		102	80	120		6020
Nickel	80.0	81.0		101	80	120		6020
Lead	80.0	79.1		99	80	120		6020
Selenium	80.0	79.9		100	80	120		6020
Cobalt	80.0	81.9		102	80	120		6020
Silver	80.0	87.9		110	80	120		6020
Thallium	80.0	79.2		99	80	120		6020
Zinc	80.0	76.2		95	80	120		6020
Molybdenum	80.0	80.8		101	80	120		6020
Vanadium	80.0	81.3		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/02/2013 08:59 End Date: 04/02/2013 10:32

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn														
STD0 440-95570/1 IC	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD1 440-95570/2 IC	1		09:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD2 440-95570/3 IC	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD3 440-95570/4 IC	1		09:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD4 440-95570/5 IC	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICV 440-95570/6	1		09:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICB 440-95570/7	1		09:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-95570/8	1		09:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-95570/9	1		09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSA 440-95570/10	1		09:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSAB 440-95570/11	1		09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
RINSE 440-95570/12			09:28																														
MB 440-95414/1-A	1	R	09:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
LCS 440-95414/2-A	1	R	09:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			09:37																														
ZZZZZZ			09:40																														
ZZZZZZ			09:42																														
ZZZZZZ			09:44																														
ZZZZZZ			09:46																														
ZZZZZZ			09:48																														
ZZZZZZ			09:51																														
240-22125-1	1	R	09:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCV 440-95570/23	1		09:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-95570/24	1		09:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22125-2	1	R	10:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22125-5	1	R	10:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22125-6	1	R	10:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22125-7	1	R	10:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:09																														
ZZZZZZ			10:11																														
ZZZZZZ			10:13																														
ZZZZZZ			10:16																														
ZZZZZZ			10:18																														
ZZZZZZ			10:20																														
ZZZZZZ			10:22																														
CCV 440-95570/36	1		10:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-95570/37	1		10:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

ICV Source: MEICPMS4 ICV_00204 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00204

Analyte	ICV 440-95570/6 04/02/2013 09:11				CCV 440-95570/23 04/02/2013 09:55				CCV 440-95570/36 04/02/2013 10:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.8		25.0	95	52.6		50.0	105	52.8		50.0	106
Arsenic	25.2		25.0	101	51.9		50.0	104	52.6		50.0	105
Barium	25.0		25.0	100	52.7		50.0	105	52.6		50.0	105
Beryllium	24.8		25.0	99	51.9		50.0	104	52.1		50.0	104
Cadmium	25.1		25.0	100	51.7		50.0	103	51.9		50.0	104
Chromium	26.6		25.0	106	52.9		50.0	106	52.7		50.0	105
Cobalt	26.0		25.0	104	53.3		50.0	107	53.8		50.0	108
Copper	25.9		25.0	103	52.1		50.0	104	52.9		50.0	106
Lead	25.5		25.0	102	52.6		50.0	105	52.4		50.0	105
Molybdenum	25.7		25.0	103	51.6		50.0	103	52.0		50.0	104
Nickel	26.1		25.0	104	52.4		50.0	105	52.9		50.0	106
Selenium	25.2		25.0	101	51.8		50.0	104	52.8		50.0	106
Silver	25.6		25.0	102	54.7		50.0	109	55.0		50.0	110
Thallium	25.2		25.0	101	52.5		50.0	105	52.7		50.0	105
Vanadium	25.7		25.0	103	53.0		50.0	106	53.3		50.0	107
Zinc	26.3		25.0	105	52.4		50.0	105	52.9		50.0	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-95570/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.13	J	113	50-150
Arsenic	1.00	0.991	J	99	50-150
Beryllium	0.500	0.515		103	50-150
Cadmium	0.500	0.507	J	101	50-150
Barium	1.00	1.02		102	50-150
Chromium	1.00	1.07	J	107	50-150
Copper	1.00	1.30	J	130	50-150
Nickel	1.00	1.10	J	110	50-150
Lead	1.00	1.07		107	50-150
Selenium	1.00	0.836	J	84	50-150
Cobalt	0.500	0.554	J	111	50-150
Silver	1.00	1.13		113	50-150
Thallium	1.00	1.07		107	50-150
Zinc	5.00	4.11	J	82	50-150
Molybdenum	1.00	1.04	J	104	50-150
Vanadium	2.00	2.09		104	50-150

Lab Sample ID: CRI 440-95570/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.13		106	50-150
Arsenic	2.00	2.03		102	50-150
Beryllium	1.00	0.990		99	50-150
Cadmium	1.00	1.07		107	50-150
Barium	2.00	2.08		104	50-150
Chromium	2.00	2.17		109	50-150
Copper	2.00	2.16		108	50-150
Nickel	2.00	2.39		120	50-150
Lead	2.00	2.13		107	50-150
Selenium	2.00	1.85	J	93	50-150
Cobalt	1.00	1.11		111	50-150
Silver	2.00	2.27		114	50-150
Thallium	2.00	2.09		104	50-150
Zinc	10.0	9.92	J	99	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-95570/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.09		104	50-150
Vanadium	4.00	4.22		106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-95570/7 04/02/2013 09:13		CCB 440-95570/24 04/02/2013 09:57		CCB 440-95570/37 04/02/2013 10:32			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.341	J	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	2.0	U	2.0	U	2.0	U		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICSA 440-95570/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00200

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.385**	
Arsenic		**0.118**	
Barium		**0.249**	
Beryllium		**0.0270**	
Cadmium		**0.947**	
Chromium		**1.69**	
Cobalt		**0.116**	
Copper		**1.02**	
Lead		**0.157**	
Molybdenum	**2000**	**2146**	**107**
Nickel		**1.14**	
Selenium		**-0.255**	
Silver		**0.0670**	
Thallium		**0.0400**	
Vanadium		**0.166**	
Zinc		**1.77**	
Aluminum	*100000*	*96895*	*97*
Calcium	*100000*	*98916*	*99*
Cerium		*0.0550*	
Iron	*100000*	*100756*	*101*
Magnesium	*100000*	*98800*	*99*
Manganese		*0.236*	
Potassium	*100000*	*99909*	*100*
Sodium	*100000*	*99791*	*100*
Tin		*0.159*	
Uranium		*0.0300*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

Lab Sample ID: ICSAB 440-95570/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00200

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**22.1**	**110**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.3**	**112**
Beryllium	**20.0**	**21.5**	**108**
Cadmium	**20.0**	**21.0**	**105**
Chromium	**20.0**	**22.4**	**112**
Cobalt	**20.0**	**20.8**	**104**
Copper	**20.0**	**20.6**	**103**
Lead	**20.0**	**20.4**	**102**
Molybdenum	**2020**	**2119**	**105**
Nickel	**20.0**	**20.8**	**104**
Selenium	**20.0**	**19.7**	**98**
Silver	**20.0**	**21.3**	**106**
Thallium	**20.0**	**20.0**	**100**
Vanadium	**20.0**	**20.9**	**105**
Zinc	**20.0**	**23.4**	**117**
Aluminum	*100000*	*96038*	*96*
Calcium	*101000*	*98848*	*98*
Cerium	*20.0*	*22.3*	*111*
Iron	*100000*	*100185*	*100*
Magnesium	*101000*	*97222*	*97*
Manganese	*20.0*	*20.5*	*103*
Potassium	*101000*	*99997*	*99*
Sodium	*101000*	*99388*	*99*
Sr	*20.0*	*27.0*	*135*
Tin	*20.0*	*21.8*	*109*
Uranium	*20.0*	*21.5*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/02/2013 End Date: 04/02/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-95570/1 IC	08:59	100		100		100		100		100	
STD1 440-95570/2 IC	09:01	100		100		100		100		100	
STD2 440-95570/3 IC	09:04	99		99		100		100		100	
STD3 440-95570/4 IC	09:06	98		100		101		100		101	
STD4 440-95570/5 IC	09:08	99		100		100		99		100	
ICV 440-95570/6	09:11	99		99		100		99		101	
ICB 440-95570/7	09:13	99		100		102		100		101	
CRI 440-95570/8	09:15	97		98		99		99		99	
CRI 440-95570/9	09:18	99		99		99		99		99	
ICSA 440-95570/10	09:20	86		95		95		92		91	
ICSAB 440-95570/11	09:22	84		95		95		92		92	
MB 440-95414/1-A	09:33	94		100		101		102		103	
LCS 440-95414/2-A	09:35	93		100		102		101		103	
240-22125-1	09:53	100		105		106		105		105	
CCV 440-95570/23	09:55	100		101		102		101		103	
CCB 440-95570/24	09:57	101		101		103		102		103	
240-22125-2	10:00	90		102		103		100		101	
240-22125-5	10:02	91		102		102		100		101	
240-22125-6	10:04	93		102		103		102		103	
240-22125-7	10:07	93		105		102		101		99	
CCV 440-95570/36	10:30	100		102		104		103		105	
CCB 440-95570/37	10:32	97		103		104		103		105	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22125-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/02/2013 End Date: 04/02/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-95570/1 IC	08:59	100									
STD1 440-95570/2 IC	09:01	101									
STD2 440-95570/3 IC	09:04	100									
STD3 440-95570/4 IC	09:06	101									
STD4 440-95570/5 IC	09:08	101									
ICV 440-95570/6	09:11	101									
ICB 440-95570/7	09:13	101									
CRI 440-95570/8	09:15	99									
CRI 440-95570/9	09:18	101									
ICSA 440-95570/10	09:20	97									
ICSAB 440-95570/11	09:22	98									
MB 440-95414/1-A	09:33	103									
LCS 440-95414/2-A	09:35	105									
240-22125-1	09:53	109									
CCV 440-95570/23	09:55	104									
CCB 440-95570/24	09:57	106									
240-22125-2	10:00	105									
240-22125-5	10:02	107									
240-22125-6	10:04	107									
240-22125-7	10:07	103									
CCV 440-95570/36	10:30	106									
CCB 440-95570/37	10:32	107									

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE: APRIL 24, 2013**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – SELECT METALS**
MIDDLE RIVER CENTER - GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-22161-1

SAMPLES: 1/Aqueous/

MRC-MW77A-031913

Overview

The sample set for Middle River Center - Groundwater, SDG 240-22161-1, consists of one (1) aqueous environmental sample. No field duplicate pairs were included within this SDG.

The sample was analyzed for select metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc. Metals analyses were conducted using SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike/matrix spike duplicate recoveries, ICP serial dilution results, internal standard recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The contract required detection limit (CRDL) percent recovery for mercury on 04/08/2013 at 14:52 was < 80% quality control limit. The nondetected result reported for mercury was qualified as biased low, "UL"

- The CRDL percent recovery for silver on 04/02/2013 at 09:18 was > 110% quality control limit. The positive result reported for silver was qualified as estimated, "J", as a result of conflicting noncompliances.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results are reported to the method detection limits.

The CRDL percent recovery for nickel on 04/02/2013 at 09:18 was > 110% quality control limit. No validation actions were required as the sample result was > 2X CRDL.

The CRDL percent recovery for mercury on 04/18/2013 at 17:29 was > 120% quality control limit. No validation action was required as the sample result was nondetected.

The following contaminants were detected in the laboratory preparation blank at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Copper	0.526 ug/L	2.63 ug/L
Molybdenum	0.267 ug/L	1.335 ug/L

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation actions were warranted as all sample results were either greater than the action level or were nondetected.

Executive Summary

Laboratory Performance:. The CRDL percent recovery for mercury on 04/08/2013 at 14:52 was < 80% quality control limit. The CRDL percent recovery for silver on 04/02/2013 at 09:18 was > 110% quality control limit.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW77A-031913		
SDG: 240-22161-1	LAB_ID	240-22161-3		
FRACTION: M	SAMP_DATE	3/19/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.3	U	
ARSENIC		0.9	U	
BARIUM		440		
BERYLLIUM		20		
CADMIUM		0.14	J	P
CHROMIUM		0.9	U	
COBALT		260		
COPPER		31		
LEAD		0.31	J	P
MERCURY		0.1	UL	C
MOLYBDENUM		0.2	U	
NICKEL		520		
SELENIUM		1.1	J	P
SILVER		0.25	J	CP
THALLIUM		0.2	U	
VANADIUM		0.8	U	
ZINC		740		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW77A-031913 Lab Sample ID: 240-22161-3

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG ID.:

Matrix: Water Date Sampled: 03/19/2013 15:08

Reporting Basis: WET Date Received: 03/20/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	20	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.14	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	440	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	31	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	520	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.31	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	1.1	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	260	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.25	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	740	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW77A-031913 Lab Sample ID: 240-22161-3

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG ID.:

Matrix: Water Date Sampled: 03/19/2013 15:08

Reporting Basis: WET Date Received: 03/20/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling

Report Number: 240-22161-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury analysis were performed at the TestAmerica Irvine Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 03/20/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.6 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW95B-031913 (240-22161-1), MRC-MW88B-031913 (240-22161-2), MRC-MW77A-031913 (240-22161-3), MRC-MW74C-031913 (240-22161-4), MRC-MW73B-031913 (240-22161-5) and TB-031913 (240-22161-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/26/2013, 03/27/2013, 03/28/2013 and 03/29/2013.

1,2,3-Trichlorobenzene and Naphthalene were detected in method blank MB 240-79480/5 at levels exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,4-Trichlorobenzene, Hexachlorobutadiene and Methylene Chloride were detected in method blank MB 240-79480/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene and Naphthalene were detected in method blank MB 240-79643/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-79817/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene, Hexachlorobutadiene and Naphthalene were detected in method blank MB 240-79934/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

tert-Butyl alcohol failed the recovery criteria low for LCS 240-79934/4.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MRC-MW95B-031913MS/MSD (240-22161-1) in batch 240-79480.

Samples MRC-MW77A-031913 (240-22161-3)[2X], MRC-MW74C-031913 (240-22161-4)[2X] and MRC-MW73B-031913 (240-22161-5) [6.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The method blank for batch 79480 contained Napthalene and 1,2,3-Trichlorobenzene above the reporting limit (RL). None of the samples associated with this method blank contained the target compounds; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 8260 stipulates a 12 hour sequence for the analysis of samples. Due to a system software issue, the MSD for sample 22349-2 exceeded the 12 hour time limit by 19 minutes. The MS/MSD was reported for batch QC.

The laboratory control sample (LCS) for batch 79934 exceeded control limits for the following analyte(s): 2-Methyl-2-propanol–has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Sample MRC-MW77A-031913 (240-22161-3) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/01/2013 and analyzed on 04/02/2013.

Copper and Molybdenum were detected in method blank MB 440-95414/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample MRC-MW77A-031913 (240-22161-3) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/08/2013.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No:
Address: 20251 Century Blvd Ste 300	Telephone: (301) 528-5552	Telephone: (703) 347-8384	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	Analyses	
Phone: (301) 528-5551				
Project Name: MRC GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04795-02	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOCs	Total Metals	Sample Specific Notes / Special Instructions:
MRC-MW95B-031913	3/A/13	1027		X						9					N	G	X		MS/MSD
MRC-MW88B-031913	↓	1145		X						3					N	G	X		
MRC-MW77A-031913		1508		X					1	3					N	G	X	X	
MRC-MW74C-031913		1330		X						3					N	G	X		
MRC-MW73B-031913	↓	1500		X						3					N	G	X		
TB-031913	—	—		X						2							X		

240-22161 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	3-19-13 / 1548	[signature]	TestAmerica	3/19/13 / 1550
[signature]	TestAmerica	3-19-2013 / 1640	[signature]	TA	3-20-13 915
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

HOLDTIME

SDG 240-22161-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW77A-031913	240-22161-3	NM	3/19/2013	4/8/2013	4/8/2013	20	0	20
M	UG/L	MRC-MW77A-031913	240-22161-3	NM	3/19/2013	4/1/2013	4/2/2013	13	1	14
OV	UG/L	TB-031913	240-22161-6	NM	3/19/2013	3/28/2013	3/28/2013	9	0	9
OV	UG/L	MRC-MW95B-031913	240-22161-1	NM	3/19/2013	3/26/2013	3/26/2013	7	0	7
OV	UG/L	MRC-MW88B-031913	240-22161-2	NM	3/19/2013	3/27/2013	3/27/2013	8	0	8
OV	UG/L	MRC-MW77A-031913	240-22161-3	NM	3/19/2013	3/27/2013	3/27/2013	8	0	8
OV	UG/L	MRC-MW74C-031913	240-22161-4	NM	3/19/2013	3/28/2013	3/28/2013	9	0	9
OV	UG/L	MRC-MW73B-031913	240-22161-5	NM	3/19/2013	3/29/2013	3/29/2013	10	0	10

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW Sampling

TestAmerica Job ID: 240-22161-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22161-1

SDG No.:

Project: MRC GW Sampling

Client Sample ID	Lab Sample ID
MRC-MW77A-031913	240-22161-3

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

ICV Source: MEICPMS4 ICV_00204 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00204

Analyte	ICV 440-95570/6 04/02/2013 09:11				CCV 440-95570/23 04/02/2013 09:55				CCV 440-95570/36 04/02/2013 10:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.8		25.0	95	52.6		50.0	105	52.8		50.0	106
Arsenic	25.2		25.0	101	51.9		50.0	104	52.6		50.0	105
Barium	25.0		25.0	100	52.7		50.0	105	52.6		50.0	105
Beryllium	24.8		25.0	99	51.9		50.0	104	52.1		50.0	104
Cadmium	25.1		25.0	100	51.7		50.0	103	51.9		50.0	104
Chromium	26.6		25.0	106	52.9		50.0	106	52.7		50.0	105
Cobalt	26.0		25.0	104	53.3		50.0	107	53.8		50.0	108
Copper	25.9		25.0	103	52.1		50.0	104	52.9		50.0	106
Lead	25.5		25.0	102	52.6		50.0	105	52.4		50.0	105
Molybdenum	25.7		25.0	103	51.6		50.0	103	52.0		50.0	104
Nickel	26.1		25.0	104	52.4		50.0	105	52.9		50.0	106
Selenium	25.2		25.0	101	51.8		50.0	104	52.8		50.0	106
Silver	25.6		25.0	102	54.7		50.0	109	55.0		50.0	110
Thallium	25.2		25.0	101	52.5		50.0	105	52.7		50.0	105
Vanadium	25.7		25.0	103	53.0		50.0	106	53.3		50.0	107
Zinc	26.3		25.0	105	52.4		50.0	105	52.9		50.0	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

ICV Source: ME 1PPM HG2_00074 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00076

Analyte	ICV 440-96763/1-A 04/08/2013 14:48				CCV 440-96763/3-A 04/08/2013 16:02				CCV 440-96763/3-A 04/08/2013 16:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.42		8.00	105	4.32		4.00	108	4.42		4.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

ICV Source: ME 1PPM HG2_00074 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00076

Analyte	CCV 440-96763/3-A 04/08/2013 17:01											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.35		4.00	109								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-95570/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00014 DO NOT USE

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.13	J	113	50-150
Arsenic	1.00	0.991	J	99	50-150
Beryllium	0.500	0.515		103	50-150
Cadmium	0.500	0.507	J	101	50-150
Barium	1.00	1.02		102	50-150
Chromium	1.00	1.07	J	107	50-150
Copper	1.00	1.30	J	130	50-150
Nickel	1.00	1.10	J	110	50-150
Lead	1.00	1.07		107	50-150
Selenium	1.00	0.836	J	84	50-150
Cobalt	0.500	0.554	J	111	50-150
Silver	1.00	1.13		113	50-150
Thallium	1.00	1.07		107	50-150
Zinc	5.00	4.11	J	82	50-150
Molybdenum	1.00	1.04	J	104	50-150
Vanadium	2.00	2.09		104	50-150

Lab Sample ID: CRI 440-95570/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.13		106	50-150
Arsenic	2.00	2.03		102	50-150
Beryllium	1.00	0.990		99	50-150
Cadmium	1.00	1.07		107	50-150
Barium	2.00	2.08		104	50-150
Chromium	2.00	2.17		109	50-150
Copper	2.00	2.16		108	50-150
Nickel	2.00	2.39		120	50-150
Lead	2.00	2.13		107	50-150
Selenium	2.00	1.85	J	93	50-150
Cobalt	1.00	1.11		111	50-150
Silver	2.00	2.27		114	50-150
Thallium	2.00	2.09		104	50-150
Zinc	10.0	9.92	J	99	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-95570/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.09		104	50-150
Vanadium	4.00	4.22		106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-96763/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.127	J	64	50-150

Lab Sample ID: CRA 440-96763/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.255		128	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-95570/7 04/02/2013 09:13		CCB 440-95570/24 04/02/2013 09:57		CCB 440-95570/37 04/02/2013 10:32			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.341	J	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	2.0	U	2.0	U	2.0	U		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96763/2-A 04/08/2013 14:50		CCB 440-96763/4-A 04/08/2013 16:05		CCB 440-96763/4-A 04/08/2013 16:34		CCB 440-96763/4-A 04/08/2013 17:04	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-95414/1-A

Instrument Code: ICPMS5 Batch No.: 95570

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.526	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	0.267	J		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96473/1-A

Instrument Code: CV-HG2 Batch No.: 96889

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Lab Sample ID: ICSA 440-95570/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00200

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Antimony		**0.385**	
Arsenic		**0.118**	
Barium		**0.249**	
Beryllium		**0.0270**	
Cadmium		**0.947**	
Chromium		**1.69**	
Cobalt		**0.116**	
Copper		**1.02**	
Lead		**0.157**	
Molybdenum	**2000**	**2146**	**107**
Nickel		**1.14**	
Selenium		**-0.255**	
Silver		**0.0670**	
Thallium		**0.0400**	
Vanadium		**0.166**	
Zinc		**1.77**	
Aluminum	*100000*	*96895*	*97*
Calcium	*100000*	*98916*	*99*
Cerium		*0.0550*	
Iron	*100000*	*100756*	*101*
Magnesium	*100000*	*98800*	*99*
Manganese		*0.236*	
Potassium	*100000*	*99909*	*100*
Sodium	*100000*	*99791*	*100*
Tin		*0.159*	
Uranium		*0.0300*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Lab Sample ID: ICSAB 440-95570/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00200

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**22.1**	**110**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.3**	**112**
Beryllium	**20.0**	**21.5**	**108**
Cadmium	**20.0**	**21.0**	**105**
Chromium	**20.0**	**22.4**	**112**
Cobalt	**20.0**	**20.8**	**104**
Copper	**20.0**	**20.6**	**103**
Lead	**20.0**	**20.4**	**102**
Molybdenum	**2020**	**2119**	**105**
Nickel	**20.0**	**20.8**	**104**
Selenium	**20.0**	**19.7**	**98**
Silver	**20.0**	**21.3**	**106**
Thallium	**20.0**	**20.0**	**100**
Vanadium	**20.0**	**20.9**	**105**
Zinc	**20.0**	**23.4**	**117**
Aluminum	*100000*	*96038*	*96*
Calcium	*101000*	*98848*	*98*
Cerium	*20.0*	*22.3*	*111*
Iron	*100000*	*100185*	*100*
Magnesium	*101000*	*97222*	*97*
Manganese	*20.0*	*20.5*	*103*
Potassium	*101000*	*99997*	*99*
Sodium	*101000*	*99388*	*99*
Sr	*20.0*	*27.0*	*135*
Tin	*20.0*	*21.8*	*109*
Uranium	*20.0*	*21.5*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW77A-031913 MS Lab ID: 240-22161-3 MS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.27		0.20	U	8.00	103	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Sample not in SDG

Client ID: _____ Lab ID: 440-42122-E-1-C MS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.1		2.0	U	80.0	103	75-125		6020
Arsenic	83.9		3.0	J	80.0	101	75-125		6020
Beryllium	85.4		0.12	J	80.0	107	75-125		6020
Cadmium	80.3		0.21	J	80.0	100	75-125		6020
Barium	188		100		80.0	107	75-125		6020
Chromium	86.5		11		80.0	94	75-125		6020
Copper	77.4		1.7	J	80.0	95	75-125		6020
Nickel	78.2		5.0		80.0	91	75-125		6020
Lead	77.5		0.53	J	80.0	96	75-125		6020
Selenium	78.2		1.1	J	80.0	96	75-125		6020
Cobalt	76.0		1.0		80.0	94	75-125		6020
Silver	86.8		0.14	J	80.0	108	75-125		6020
Thallium	79.2		2.0	U	80.0	99	75-125		6020
Zinc	78.5		20	U	80.0	98	75-125		6020
Molybdenum	95.0		13		80.0	102	75-125		6020
Vanadium	93.1		14	J	80.0	98	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW77A-031913 MSD
Lab ID: 240-22161-3 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22161-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.31		8.00	104	70-130	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Sample not in SDG

Client ID: _____ Lab ID: 440-42122-E-1-D MSD

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.9		80.0	100	75-125	3	20		6020
Arsenic	83.9		80.0	101	75-125	0	20		6020
Beryllium	85.4		80.0	107	75-125	0	20		6020
Cadmium	78.9		80.0	98	75-125	2	20		6020
Barium	186		80.0	104	75-125	1	20		6020
Chromium	87.0		80.0	95	75-125	1	20		6020
Copper	75.8		80.0	93	75-125	2	20		6020
Nickel	78.6		80.0	92	75-125	1	20		6020
Lead	77.5		80.0	96	75-125	0	20		6020
Selenium	77.8		80.0	96	75-125	1	20		6020
Cobalt	76.5		80.0	94	75-125	1	20		6020
Silver	84.3		80.0	105	75-125	3	20		6020
Thallium	78.6		80.0	98	75-125	1	20		6020
Zinc	77.6		80.0	97	75-125	1	20		6020
Molybdenum	93.0		80.0	100	75-125	2	20		6020
Vanadium	92.6		80.0	98	75-125	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-42122-E-1-B PDS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	81.4		2.0	U	80.0	102	75-125		6020
Arsenic	82.8		3.0	J	80.0	100	75-125		6020
Beryllium	82.2		0.12	J	80.0	103	75-125		6020
Cadmium	77.8		0.21	J	80.0	97	75-125		6020
Barium	184		100		80.0	102	75-125		6020
Chromium	85.7		11		80.0	93	75-125		6020
Copper	74.7		1.7	J	80.0	91	75-125		6020
Nickel	77.2		5.0		80.0	90	75-125		6020
Lead	76.7		0.53	J	80.0	95	75-125		6020
Selenium	77.4		1.1	J	80.0	95	75-125		6020
Cobalt	74.8		1.0		80.0	92	75-125		6020
Silver	83.1		0.14	J	80.0	104	75-125		6020
Thallium	77.3		2.0	U	80.0	97	75-125		6020
Zinc	100		20	U	80.0	125	75-125		6020
Molybdenum	93.2		13		80.0	100	75-125		6020
Vanadium	90.7		14	J	80.0	95	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-95414/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00015

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	80.6		101	80	120		6020
Arsenic	80.0	80.3		100	80	120		6020
Beryllium	80.0	82.0		103	80	120		6020
Cadmium	80.0	80.4		100	80	120		6020
Barium	80.0	80.7		101	80	120		6020
Chromium	80.0	80.6		101	80	120		6020
Copper	80.0	81.3		102	80	120		6020
Nickel	80.0	81.0		101	80	120		6020
Lead	80.0	79.1		99	80	120		6020
Selenium	80.0	79.9		100	80	120		6020
Cobalt	80.0	81.9		102	80	120		6020
Silver	80.0	87.9		110	80	120		6020
Thallium	80.0	79.2		99	80	120		6020
Zinc	80.0	76.2		95	80	120		6020
Molybdenum	80.0	80.8		101	80	120		6020
Vanadium	80.0	81.3		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-96473/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00076

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.27		103	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Sample not in SDG

Lab ID: 240-22242-A-7-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22161-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	5.0	U	25	U	NC		6020
Beryllium	3.2		3.22	J	NC		6020
Cadmium	0.38	J	5.0	U	NC		6020
Barium	53		52.7		1.2		6020
Chromium	2.0	U	10	U	NC		6020
Copper	7.8		7.97	J	NC		6020
Nickel	36		38.3		6.3		6020
Lead	0.28	J	5.0	U	NC		6020
Selenium	2.2	J	2.66	J	NC		6020
Cobalt	41		43.5		5.9		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	99		85.6	J	NC		6020
Molybdenum	10	U	50	U	NC		6020
Vanadium	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22161-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22161-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22161-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-95414/1-A	04/01/2013 14:05	95414		50	50
LCS 440-95414/2-A	04/01/2013 14:05	95414		50	50
440-42122-E-1-C MS	04/01/2013 14:05	95414		50	50
440-42122-E-1-D MSD	04/01/2013 14:05	95414		50	50
240-22161-3	04/01/2013 14:05	95414		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-96473/1-A	04/08/2013 12:21	96473		20	20
LCS 440-96473/2-A	04/08/2013 12:21	96473		20	20
240-22161-3	04/08/2013 12:21	96473		20	20
240-22161-3 MS	04/08/2013 12:21	96473		20	20
240-22161-3 MSD	04/08/2013 12:21	96473		20	20

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/02/2013 08:59 End Date: 04/02/2013 10:32

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn														
STD0 440-95570/1 IC	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD1 440-95570/2 IC	1		09:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD2 440-95570/3 IC	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD3 440-95570/4 IC	1		09:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD4 440-95570/5 IC	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICV 440-95570/6	1		09:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICB 440-95570/7	1		09:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-95570/8	1		09:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-95570/9	1		09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSA 440-95570/10	1		09:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSAB 440-95570/11	1		09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
RINSE 440-95570/12			09:28																														
MB 440-95414/1-A	1	R	09:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
LCS 440-95414/2-A	1	R	09:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			09:37																														
440-42122-E-1-C MS	1	R	09:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
440-42122-E-1-D MSD	1	R	09:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
440-42122-E-1-B PDS	1	R	09:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			09:46																														
ZZZZZZ			09:48																														
ZZZZZZ			09:51																														
ZZZZZZ			09:53																														
CCV 440-95570/23	1		09:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-95570/24	1		09:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:00																														
ZZZZZZ			10:02																														
ZZZZZZ			10:04																														
ZZZZZZ			10:07																														
240-22161-3	1	R	10:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:11																														
ZZZZZZ			10:13																														
ZZZZZZ			10:16																														
240-22242-A-7-A SD ^5	5	R	10:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:20																														
ZZZZZZ			10:22																														
CCV 440-95570/36	1		10:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-95570/37	1		10:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/08/2013 14:33 End Date: 04/08/2013 17:29

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-96763/6-A	1		14:33	X
IC 440-96763/7-A	1		14:35	X
IC 440-96763/8-A	1		14:37	X
IC 440-96763/9-A	1		14:40	X
IC 440-96763/10-A	1		14:42	X
IC 440-96763/11-A	1		14:45	X
ICV 440-96763/1-A	1		14:48	X
ICB 440-96763/2-A	1		14:50	X
CRA 440-96763/5-A	1		14:52	X
CCV 440-96763/3-A			15:31	
CCB 440-96763/4-A			15:34	
ZZZZZZ			15:38	
ZZZZZZ			15:40	
ZZZZZZ			15:42	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:55	
ZZZZZZ			15:57	
ZZZZZZ			16:00	
CCV 440-96763/3-A	1		16:02	X
CCB 440-96763/4-A	1		16:05	X
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
ZZZZZZ			16:17	
ZZZZZZ			16:19	
ZZZZZZ			16:22	
ZZZZZZ			16:24	
MB 440-96473/1-A	1	T	16:27	X
LCS 440-96473/2-A	1	T	16:29	X
CCV 440-96763/3-A	1		16:32	X
CCB 440-96763/4-A	1		16:34	X
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:42	
ZZZZZZ			16:44	
240-22161-3	1	T	16:47	X
240-22161-3 MS	1	T	16:49	X
240-22161-3 MSD	1	T	16:52	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/08/2013 14:33 End Date: 04/08/2013 17:29

Lab Sample Id	D/F	Type	Time	Analytes																										
				Hg																										
ZZZZZZ			16:54																											
ZZZZZZ			16:57																											
ZZZZZZ			16:59																											
CCV 440-96763/3-A	1		17:01	X																										
CCB 440-96763/4-A	1		17:04	X																										
ZZZZZZ			17:06																											
ZZZZZZ			17:09																											
ZZZZZZ			17:11																											
ZZZZZZ			17:14																											
ZZZZZZ			17:16																											
ZZZZZZ			17:19																											
ZZZZZZ			17:21																											
CCV 440-96763/3-A			17:23																											
CCB 440-96763/4-A			17:26																											
CRA 440-96763/5-A	1		17:29	X																										

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/02/2013 End Date: 04/02/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-95570/1 IC	08:59	100		100		100		100		100	
STD1 440-95570/2 IC	09:01	100		100		100		100		100	
STD2 440-95570/3 IC	09:04	99		99		100		100		100	
STD3 440-95570/4 IC	09:06	98		100		101		100		101	
STD4 440-95570/5 IC	09:08	99		100		100		99		100	
ICV 440-95570/6	09:11	99		99		100		99		101	
ICB 440-95570/7	09:13	99		100		102		100		101	
CRI 440-95570/8	09:15	97		98		99		99		99	
CRI 440-95570/9	09:18	99		99		99		99		99	
ICSA 440-95570/10	09:20	86		95		95		92		91	
ICSAB 440-95570/11	09:22	84		95		95		92		92	
MB 440-95414/1-A	09:33	94		100		101		102		103	
LCS 440-95414/2-A	09:35	93		100		102		101		103	
440-42122-E-1-C MS	09:40	88		102		99		98		97	
440-42122-E-1-D MSD	09:42	89		101		99		99		98	
440-42122-E-1-B PDS	09:44	91		102		99		99		98	
CCV 440-95570/23	09:55	100		101		102		101		103	
CCB 440-95570/24	09:57	101		101		103		102		103	
240-22161-3	10:09	94		109		109		105		103	
240-22242-A-7-A SD	10:18	101		109		109		108		109	
CCV 440-95570/36	10:30	100		102		104		103		105	
CCB 440-95570/37	10:32	97		103		104		103		105	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22161-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/02/2013 End Date: 04/02/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-95570/1 IC	08:59	100									
STD1 440-95570/2 IC	09:01	101									
STD2 440-95570/3 IC	09:04	100									
STD3 440-95570/4 IC	09:06	101									
STD4 440-95570/5 IC	09:08	101									
ICV 440-95570/6	09:11	101									
ICB 440-95570/7	09:13	101									
CRI 440-95570/8	09:15	99									
CRI 440-95570/9	09:18	101									
ICSA 440-95570/10	09:20	97									
ICSAB 440-95570/11	09:22	98									
MB 440-95414/1-A	09:33	103									
LCS 440-95414/2-A	09:35	105									
440-42122-E-1-C MS	09:40	103									
440-42122-E-1-D MSD	09:42	103									
440-42122-E-1-B PDS	09:44	103									
CCV 440-95570/23	09:55	104									
CCB 440-95570/24	09:57	106									
240-22161-3	10:09	106									
240-22242-A-7-A SD	10:18	111									
CCV 440-95570/36	10:30	106									
CCB 440-95570/37	10:32	107									

Sample Report

Sample Table

Sample Name	240-22161-d-3-a
Data File Name	030SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1304
Acq Date Time	2013-04-02T10:09:22-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-95414 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

Sample MRL-MW77A-031913 Be rep. result 20 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	20.371	20.371	3.32	131534	1.61	3000	
Na	23	1	No Gas	OR	OR	#VALUE!	OR	#VALUE!	100000	
Mg	24	1	No Gas	18763.885	18763.885	2.89	457117360	2.07	112500	
Al	27	1	No Gas	732.451	732.451	2.65	23728432	3.90	4000	
K	39	1	No Gas	2210.702	2210.702	1.45	95571127	0.19	87500	
Ca	44	1	No Gas	10300.377	10300.377	1.38	13070200	1.69	225000	
V	51	1	No Gas	0.537	0.537	4.71	32749	5.27	4000	
Cr	52	1	No Gas	0.378	0.378	16.05	37351	6.25	4000	
Mn	55	1	No Gas	12640.112	12640.112	1.77	753794192	0.68	4000	>LDR
Fe	56	1	No Gas	95128.350	95128.350	1.10	4497171164	0.38	40000	>LDR
Co	59	1	No Gas	262.509	262.509	0.76	12452929	0.70	4000	
Ni	60	1	No Gas	517.479	517.479	0.22	5670791	1.25	4000	
Cu	65	1	No Gas	31.075	31.075	1.38	385054	1.31	4000	
Zn	66	1	No Gas	740.101	740.101	1.45	5217905	0.63	2500	
As	75	1	No Gas	0.313	0.313	33.43	1928	33.96	4000	
Se	82	1	No Gas	1.061	1.061	21.46	461	23.38	4000	
Sr	88	1	No Gas	175.437	175.437	1.47	10064218	1.40	4000	
Mo	95	1	No Gas	0.149	0.149	36.65	1917	34.22	4000	
[Mo]	98	1	No Gas	0.072	0.072	76.38	1689	60.47	4000	
Ag	107	1	No Gas	0.252	0.252	3.96	6388	5.02	100	
Cd	111	1	No Gas	0.144	0.144	22.53	883	21.49	4000	
[Cd]	114	1	No Gas	0.154	0.154	8.72	1706	10.77	4000	
Sn	118	1	No Gas	0.062	0.062	38.08	1857	21.82	4000	
Sb	123	1	No Gas	0.065	0.065	40.35	1661	28.18	4000	
Ba	137	1	No Gas	435.835	435.835	2.35	3580575	1.42	4000	
Ce	140	1	No Gas	40.427	40.427	1.98	2943643	1.02	4000	
Tl	205	1	No Gas	0.176	0.176	13.09	7371	13.46	4000	
Pb	208	1	No Gas	0.306	0.306	3.57	19582	3.80	4000	
U	238	1	No Gas	0.165	0.165	16.15	9601	16.82	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	1261193	1.94	1336190	94.39	60	120	
Sc-45 (IS)	45	1	No Gas	4190625	1.27	3860647	108.55	60	120	
Ge (IS)	72	1	No Gas	867919	2.00	798006	108.76	60	120	
Ge (IS)	74	1	No Gas	1164738	1.29	1113827	104.57	60	120	
In-115 (IS)	115	1	No Gas	4761707	1.07	4632466	102.79	60	120	
Tb-159 (IS)	159	1	No Gas	6023114	0.91	5683169	105.98	60	120	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE: APRIL 19, 2013**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – SELECT METALS**
MIDDLE RIVER CENTER - GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-22242-1

SAMPLES: 3/Aqueous/

MRC-MW-105A-032013 MRC-MW102B-032013
MRC-MW79B-032013

Overview

The sample set for Middle River Center - Groundwater, SDG 240-22242-1, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for select metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium and zinc. Metals analyses were conducted using SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike/matrix spike duplicate recoveries, ICP serial dilution results, internal standard recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The contract required detection limit (CRDL) percent recovery for mercury on 04/08/2013 at 14:52 was < 80% quality control limit affecting all samples. The nondetected results reported for mercury were qualified as biased low, "UL"

- The following contaminants were detected in the laboratory preparation blank at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Copper	0.526 ug/L	2.63 ug/L
Molybdenum	0.267 ug/L	1.335 ug/L

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive result less than the blank action level reported for molybdenum was qualified "B" as a result of laboratory blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results are reported to the method detection limits.

The CRDL percent recoveries for nickel and silver were > 110% quality control limit affecting all samples. No validation actions were required as all sample results were > 2X CRDL or were nondetects.

The CRDL percent recovery for mercury on 04/18/2013 at 17:29 was > 120% quality control limit affecting all samples. No validation actions were required as all sample results were nondetects.

Executive Summary

Laboratory Performance: Several contaminants were present in the laboratory method / preparation blanks. The CRDL percent recovery for mercury on 04/08/2013 at 14:52 was < 80% quality control limit affecting all samples.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW102B-032013			MRC-MW-105A-032013			MRC-MW79B-032013		
SDG: 240-22242-1	LAB_ID	240-22242-5			240-22242-7			240-22242-6		
FRACTION: M	SAMP_DATE	3/20/2013			3/20/2013			3/20/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U	
ARSENIC		0.9	U		0.9	U		2.9	J	P
BARIUM		49			53			320		
BERYLLIUM		16			3.2			2		
CADMIUM		1.2			0.38	J	P	0.28	J	P
CHROMIUM		0.9	U		0.9	U		2.9		
COBALT		450			41			300		
COPPER		2.7			7.8			16		
LEAD		0.42	J	P	0.28	J	P	0.78	J	P
MERCURY		0.1	UL	C	0.1	UL	C	0.1	UL	C
MOLYBDENUM		0.2	U		0.2	U		0.81	B	A
NICKEL		630			36			100		
SELENIUM		0.68	J	P	2.2	J	P	0.52	J	P
SILVER		0.1	U		0.1	U		0.1	U	
THALLIUM		0.2	U		0.2	U		0.2	U	
VANADIUM		0.8	U		0.8	U		4.8	J	P
ZINC		760			99			170		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-105A-032013 Lab Sample ID: 240-22242-7

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG ID.:

Matrix: Water Date Sampled: 03/20/2013 10:32

Reporting Basis: WET Date Received: 03/21/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	3.2	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.38	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	53	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	7.8	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	36	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.28	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	2.2	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	41	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	99	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-105A-032013 Lab Sample ID: 240-22242-7

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG ID.:

Matrix: Water Date Sampled: 03/20/2013 10:32

Reporting Basis: WET Date Received: 03/21/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW102B-032013 Lab Sample ID: 240-22242-5

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG ID.:

Matrix: Water Date Sampled: 03/20/2013 13:20

Reporting Basis: WET Date Received: 03/21/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	16	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.2	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	49	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.7	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	630	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.42	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.68	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	450	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	760	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW102B-032013 Lab Sample ID: 240-22242-5

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG ID.:

Matrix: Water Date Sampled: 03/20/2013 13:20

Reporting Basis: WET Date Received: 03/21/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW79B-032013 Lab Sample ID: 240-22242-6

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG ID.:

Matrix: Water Date Sampled: 03/20/2013 14:40

Reporting Basis: WET Date Received: 03/21/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	2.9	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	2.0	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.28	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	320	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.9	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	16	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	100	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.78	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.52	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	300	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	170	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.81	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	4.8	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW79B-032013 Lab Sample ID: 240-22242-6

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG ID.:

Matrix: Water Date Sampled: 03/20/2013 14:40

Reporting Basis: WET Date Received: 03/21/2013 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: Middle River Complex, MD

Report Number: 240-22242-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury analysis were performed at the TestAmerica Irvine Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT
The samples were received on 03/21/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.7 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples TB-032013 (240-22242-1), MRC-MW101A-032013 (240-22242-2), MRC-MW101B-032013 (240-22242-3), MRC-MW102A-032013 (240-22242-4), MRC-MW102B-032013 (240-22242-5), MRC-MW79B-032013 (240-22242-6), MRC-MW-38A-032013 (240-22242-8), MRC-MW-38B-032013 (240-22242-9) and MRC-MW-94B-032013 (240-22242-10) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/27/2013.

Several analytes were detected in method blank MB 240-79631/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Samples MRC-MW101A-032013 (240-22242-2)[1.43X], MRC-MW102B-032013 (240-22242-5)[9.09X] and MRC-MW79B-032013 (240-22242-6)[9.52X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 79631 exceeded control limits for the following analyte(s): Dichlorodifluoromethane and Trichlorofluoromethane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW102B-032013 (240-22242-5), MRC-MW79B-032013 (240-22242-6) and MRC-MW-105A-032013 (240-22242-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/01/2013 and analyzed on 04/02/2013.

Copper and Molybdenum were detected in method blank MB 440-95414/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW102B-032013 (240-22242-5), MRC-MW79B-032013 (240-22242-6) and MRC-MW-105A-032013 (240-22242-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/08/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: Middle River Complex, MD

TestAmerica Job ID: 240-22242-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: Tetra Tech, Inc
Project/Site: Middle River Complex, MD

TestAmerica Job ID: 240-22242-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22242-1	TB-032013	Water	03/20/13 00:00	03/21/13 10:00
240-22242-2	MRC-MW101A-032013	Water	03/20/13 09:25	03/21/13 10:00
240-22242-3	MRC-MW101B-032013	Water	03/20/13 10:35	03/21/13 10:00
240-22242-4	MRC-MW102A-032013	Water	03/20/13 12:05	03/21/13 10:00
240-22242-5	MRC-MW102B-032013	Water	03/20/13 13:20	03/21/13 10:00
240-22242-6	MRC-MW79B-032013	Water	03/20/13 14:40	03/21/13 10:00
240-22242-7	MRC-MW-105A-032013	Water	03/20/13 10:32	03/21/13 10:00
240-22242-8	MRC-MW-38A-032013	Water	03/20/13 11:34	03/21/13 10:00
240-22242-9	MRC-MW-38B-032013	Water	03/20/13 13:59	03/21/13 10:00
240-22242-10	MRC-MW-94B-032013	Water	03/20/13 15:35	03/21/13 10:00

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Tony Aparavage	3/20/13	114471
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
20251 Century Blvd Ste200	(301)528-5552		
City	**State**	**Zip Code**	**Site Contact**	**Lab Contact**
Germantown	MD	20874	Stu Cameron	
Project Name and Location (State)	**Carrier/Waybill Number**	
Middle River Complex, MD		
Contract/Purchase Order/Quote No.	
112IC04795-02	

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	Total Metals	Special Instructions/ Conditions of Receipt
TB-032013	—	—		X						2			X		
MRC-MW101A-032013	3/20/13	0925		X						3			X		
MRC-MW101B-032013		1035		X						3			X		
MRC-MW102A-032013		1205		X						3			X		
MRC-MW102B-032013		1320		X					1	3			X	X	
MRC-MW79B-032013		1440		X					1	3			X	X	
MRC-MW-105A-032013		1032		X					1					X	
MRC-MW-38A-032013		1134		X						3			X		
MRC-MW-38B-032013		1359		X						3			X		
MRC-MW-94B-032013		1535		X						3			X		

240-22242 Chain of Custody

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3-20-13	1600	1. Received By	3/20/13	1600
2. Relinquished By	3/20/13	1700	2. Received By	3-21-13	1000
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

HOLDTIME

SDG 240-22242-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW79B-032013	240-22242-6	NM	3/20/2013	4/8/2013	4/8/2013	19	0	19
HG	UG/L	MRC-MW-105A-032013	240-22242-7	NM	3/20/2013	4/8/2013	4/8/2013	19	0	19
HG	UG/L	MRC-MW102B-032013	240-22242-5	NM	3/20/2013	4/8/2013	4/8/2013	19	0	19
M	UG/L	MRC-MW79B-032013	240-22242-6	NM	3/20/2013	4/1/2013	4/2/2013	12	1	13
M	UG/L	MRC-MW-105A-032013	240-22242-7	NM	3/20/2013	4/1/2013	4/2/2013	12	1	13
M	UG/L	MRC-MW102B-032013	240-22242-5	NM	3/20/2013	4/1/2013	4/2/2013	12	1	13
OV	UG/L	TB-032013	240-22242-1	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW-94B-032013	240-22242-10	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW79B-032013	240-22242-6	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW-38B-032013	240-22242-9	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW-38A-032013	240-22242-8	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW102B-032013	240-22242-5	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW102A-032013	240-22242-4	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW101B-032013	240-22242-3	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7
OV	UG/L	MRC-MW101A-032013	240-22242-2	NM	3/20/2013	3/27/2013	3/27/2013	7	0	7

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

ICV Source: MEICPMS4 ICV_00204 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00204

Analyte	ICV 440-95570/6 04/02/2013 09:11				CCV 440-95570/23 04/02/2013 09:55				CCV 440-95570/36 04/02/2013 10:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.8		25.0	95	52.6		50.0	105	52.8		50.0	106
Arsenic	25.2		25.0	101	51.9		50.0	104	52.6		50.0	105
Barium	25.0		25.0	100	52.7		50.0	105	52.6		50.0	105
Beryllium	24.8		25.0	99	51.9		50.0	104	52.1		50.0	104
Cadmium	25.1		25.0	100	51.7		50.0	103	51.9		50.0	104
Chromium	26.6		25.0	106	52.9		50.0	106	52.7		50.0	105
Cobalt	26.0		25.0	104	53.3		50.0	107	53.8		50.0	108
Copper	25.9		25.0	103	52.1		50.0	104	52.9		50.0	106
Lead	25.5		25.0	102	52.6		50.0	105	52.4		50.0	105
Molybdenum	25.7		25.0	103	51.6		50.0	103	52.0		50.0	104
Nickel	26.1		25.0	104	52.4		50.0	105	52.9		50.0	106
Selenium	25.2		25.0	101	51.8		50.0	104	52.8		50.0	106
Silver	25.6		25.0	102	54.7		50.0	109	55.0		50.0	110
Thallium	25.2		25.0	101	52.5		50.0	105	52.7		50.0	105
Vanadium	25.7		25.0	103	53.0		50.0	106	53.3		50.0	107
Zinc	26.3		25.0	105	52.4		50.0	105	52.9		50.0	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

ICV Source: ME 1PPM HG2_00074 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00076

Analyte	ICV 440-96763/1-A 04/08/2013 14:48				CCV 440-96763/3-A 04/08/2013 16:02				CCV 440-96763/3-A 04/08/2013 16:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.42		8.00	105	4.32		4.00	108	4.42		4.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

ICV Source: ME 1PPM HG2_00074 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00076

Analyte	CCV 440-96763/3-A 04/08/2013 17:01											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.35		4.00	109								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-95570/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00014

Do not use

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.13	J	113	50-150
Arsenic	1.00	0.991	J	99	50-150
Beryllium	0.500	0.515		103	50-150
Cadmium	0.500	0.507	J	101	50-150
Barium	1.00	1.02		102	50-150
Chromium	1.00	1.07	J	107	50-150
Copper	1.00	1.30	J	130	50-150
Nickel	1.00	1.10	J	110	50-150
Lead	1.00	1.07		107	50-150
Selenium	1.00	0.836	J	84	50-150
Cobalt	0.500	0.554	J	111	50-150
Silver	1.00	1.13		113	50-150
Thallium	1.00	1.07		107	50-150
Zinc	5.00	4.11	J	82	50-150
Molybdenum	1.00	1.04	J	104	50-150
Vanadium	2.00	2.09		104	50-150

Lab Sample ID: CRI 440-95570/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.13		106	50-150
Arsenic	2.00	2.03		102	50-150
Beryllium	1.00	0.990		99	50-150
Cadmium	1.00	1.07		107	50-150
Barium	2.00	2.08		104	50-150
Chromium	2.00	2.17		109	50-150
Copper	2.00	2.16		108	50-150
Nickel	2.00	2.39		120	50-150
Lead	2.00	2.13		107	50-150
Selenium	2.00	1.85	J	93	50-150
Cobalt	1.00	1.11		111	50-150
Silver	2.00	2.27		114	50-150
Thallium	2.00	2.09		104	50-150
Zinc	10.0	9.92	J	99	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-95570/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00014

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.09		104	50-150
Vanadium	4.00	4.22		106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-96763/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.127	J	64	50-150

Lab Sample ID: CRA 440-96763/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.255		128	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-95570/7 04/02/2013 09:13		CCB 440-95570/24 04/02/2013 09:57		CCB 440-95570/37 04/02/2013 10:32			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.341	J	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	2.0	U	2.0	U	2.0	U		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96763/2-A 04/08/2013 14:50		CCB 440-96763/4-A 04/08/2013 16:05		CCB 440-96763/4-A 04/08/2013 16:34		CCB 440-96763/4-A 04/08/2013 17:04	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-95414/1-A

Instrument Code: ICPMS5 Batch No.: 95570

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.526	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	0.267	J		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96473/1-A

Instrument Code: CV-HG2 Batch No.: 96889

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Lab Sample ID: ICSA 440-95570/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00200

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Antimony		**0.385**	
Arsenic		**0.118**	
Barium		**0.249**	
Beryllium		**0.0270**	
Cadmium		**0.947**	
Chromium		**1.69**	
Cobalt		**0.116**	
Copper		**1.02**	
Lead		**0.157**	
Molybdenum	**2000**	**2146**	**107**
Nickel		**1.14**	
Selenium		**-0.255**	
Silver		**0.0670**	
Thallium		**0.0400**	
Vanadium		**0.166**	
Zinc		**1.77**	
Aluminum	*100000*	*96895*	*97*
Calcium	*100000*	*98916*	*99*
Cerium		*0.0550*	
Iron	*100000*	*100756*	*101*
Magnesium	*100000*	*98800*	*99*
Manganese		*0.236*	
Potassium	*100000*	*99909*	*100*
Sodium	*100000*	*99791*	*100*
Tin		*0.159*	
Uranium		*0.0300*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Lab Sample ID: ICSAB 440-95570/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00200

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**22.1**	**110**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.3**	**112**
Beryllium	**20.0**	**21.5**	**108**
Cadmium	**20.0**	**21.0**	**105**
Chromium	**20.0**	**22.4**	**112**
Cobalt	**20.0**	**20.8**	**104**
Copper	**20.0**	**20.6**	**103**
Lead	**20.0**	**20.4**	**102**
Molybdenum	**2020**	**2119**	**105**
Nickel	**20.0**	**20.8**	**104**
Selenium	**20.0**	**19.7**	**98**
Silver	**20.0**	**21.3**	**106**
Thallium	**20.0**	**20.0**	**100**
Vanadium	**20.0**	**20.9**	**105**
Zinc	**20.0**	**23.4**	**117**
Aluminum	*100000*	*96038*	*96*
Calcium	*101000*	*98848*	*98*
Cerium	*20.0*	*22.3*	*111*
Iron	*100000*	*100185*	*100*
Magnesium	*101000*	*97222*	*97*
Manganese	*20.0*	*20.5*	*103*
Potassium	*101000*	*99997*	*99*
Sodium	*101000*	*99388*	*99*
Sr	*20.0*	*27.0*	*135*
Tin	*20.0*	*21.8*	*109*
Uranium	*20.0*	*21.5*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Sample not in SDG

Client ID: _____ Lab ID: 440-42122-E-1-C MS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.1		2.0	U	80.0	103	75-125		6020
Arsenic	83.9		3.0	J	80.0	101	75-125		6020
Beryllium	85.4		0.12	J	80.0	107	75-125		6020
Cadmium	80.3		0.21	J	80.0	100	75-125		6020
Barium	188		100		80.0	107	75-125		6020
Chromium	86.5		11		80.0	94	75-125		6020
Copper	77.4		1.7	J	80.0	95	75-125		6020
Nickel	78.2		5.0		80.0	91	75-125		6020
Lead	77.5		0.53	J	80.0	96	75-125		6020
Selenium	78.2		1.1	J	80.0	96	75-125		6020
Cobalt	76.0		1.0		80.0	94	75-125		6020
Silver	86.8		0.14	J	80.0	108	75-125		6020
Thallium	79.2		2.0	U	80.0	99	75-125		6020
Zinc	78.5		20	U	80.0	98	75-125		6020
Molybdenum	95.0		13		80.0	102	75-125		6020
Vanadium	93.1		14	J	80.0	98	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Sample not in SDG

Client ID: _____ Lab ID: 240-22161-D-3-C MS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.27		0.20	U	8.00	103	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Sample not in SDG

Client ID: _____ Lab ID: 440-42122-E-1-D MSD

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.9		80.0	100	75-125	3	20		6020
Arsenic	83.9		80.0	101	75-125	0	20		6020
Beryllium	85.4		80.0	107	75-125	0	20		6020
Cadmium	78.9		80.0	98	75-125	2	20		6020
Barium	186		80.0	104	75-125	1	20		6020
Chromium	87.0		80.0	95	75-125	1	20		6020
Copper	75.8		80.0	93	75-125	2	20		6020
Nickel	78.6		80.0	92	75-125	1	20		6020
Lead	77.5		80.0	96	75-125	0	20		6020
Selenium	77.8		80.0	96	75-125	1	20		6020
Cobalt	76.5		80.0	94	75-125	1	20		6020
Silver	84.3		80.0	105	75-125	3	20		6020
Thallium	78.6		80.0	98	75-125	1	20		6020
Zinc	77.6		80.0	97	75-125	1	20		6020
Molybdenum	93.0		80.0	100	75-125	2	20		6020
Vanadium	92.6		80.0	98	75-125	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Sample not in SDG

Client ID: _____ Lab ID: 240-22161-D-3-D MSD

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.31	8.00	104	70-130	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Sample not in SDG

Client ID: _____ Lab ID: 440-42122-E-1-B PDS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	81.4		2.0	U	80.0	102	75-125		6020
Arsenic	82.8		3.0	J	80.0	100	75-125		6020
Beryllium	82.2		0.12	J	80.0	103	75-125		6020
Cadmium	77.8		0.21	J	80.0	97	75-125		6020
Barium	184		100		80.0	102	75-125		6020
Chromium	85.7		11		80.0	93	75-125		6020
Copper	74.7		1.7	J	80.0	91	75-125		6020
Nickel	77.2		5.0		80.0	90	75-125		6020
Lead	76.7		0.53	J	80.0	95	75-125		6020
Selenium	77.4		1.1	J	80.0	95	75-125		6020
Cobalt	74.8		1.0		80.0	92	75-125		6020
Silver	83.1		0.14	J	80.0	104	75-125		6020
Thallium	77.3		2.0	U	80.0	97	75-125		6020
Zinc	100		20	U	80.0	125	75-125		6020
Molybdenum	93.2		13		80.0	100	75-125		6020
Vanadium	90.7		14	J	80.0	95	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-95414/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00015

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	80.6		101	80	120		6020
Arsenic	80.0	80.3		100	80	120		6020
Beryllium	80.0	82.0		103	80	120		6020
Cadmium	80.0	80.4		100	80	120		6020
Barium	80.0	80.7		101	80	120		6020
Chromium	80.0	80.6		101	80	120		6020
Copper	80.0	81.3		102	80	120		6020
Nickel	80.0	81.0		101	80	120		6020
Lead	80.0	79.1		99	80	120		6020
Selenium	80.0	79.9		100	80	120		6020
Cobalt	80.0	81.9		102	80	120		6020
Silver	80.0	87.9		110	80	120		6020
Thallium	80.0	79.2		99	80	120		6020
Zinc	80.0	76.2		95	80	120		6020
Molybdenum	80.0	80.8		101	80	120		6020
Vanadium	80.0	81.3		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-96473/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00076

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.27		103	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22242-7

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22242-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	5.0	U	25	U	NC		6020
Beryllium	3.2		3.22	J	NC		6020
Cadmium	0.38	J	5.0	U	NC		6020
Barium	53		52.7		1.2		6020
Chromium	2.0	U	10	U	NC		6020
Copper	7.8		7.97	J	NC		6020
Nickel	36		38.3		6.3		6020
Lead	0.28	J	5.0	U	NC		6020
Selenium	2.2	J	2.66	J	NC		6020
Cobalt	41		43.5		5.9		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	99		85.6	J	NC		6020
Molybdenum	10	U	50	U	NC		6020
Vanadium	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22242-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22242-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22242-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22242-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-95414/1-A	04/01/2013 14:05	95414		50	50
LCS 440-95414/2-A	04/01/2013 14:05	95414		50	50
440-42122-E-1-C MS	04/01/2013 14:05	95414		50	50
440-42122-E-1-D MSD	04/01/2013 14:05	95414		50	50
240-22242-5	04/01/2013 14:05	95414		50	50
240-22242-6	04/01/2013 14:05	95414		50	50
240-22242-7	04/01/2013 14:05	95414		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-96473/1-A	04/08/2013 12:21	96473		20	20
LCS 440-96473/2-A	04/08/2013 12:21	96473		20	20
240-22161-D-3-C MS	04/08/2013 12:21	96473		20	20
240-22161-D-3-D MSD	04/08/2013 12:21	96473		20	20
240-22242-5	04/08/2013 12:21	96473		20	20
240-22242-6	04/08/2013 12:21	96473		20	20
240-22242-7	04/08/2013 12:21	96473		20	20

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/02/2013 08:59 End Date: 04/02/2013 10:32

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn														
STD0 440-95570/1 IC	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD1 440-95570/2 IC	1		09:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD2 440-95570/3 IC	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD3 440-95570/4 IC	1		09:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD4 440-95570/5 IC	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICV 440-95570/6	1		09:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICB 440-95570/7	1		09:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-95570/8	1		09:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-95570/9	1		09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSA 440-95570/10	1		09:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSAB 440-95570/11	1		09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
RINSE 440-95570/12			09:28																														
MB 440-95414/1-A	1	R	09:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
LCS 440-95414/2-A	1	R	09:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			09:37																														
440-42122-E-1-C MS	1	R	09:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
440-42122-E-1-D MSD	1	R	09:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
440-42122-E-1-B PDS	1	R	09:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			09:46																														
ZZZZZZ			09:48																														
ZZZZZZ			09:51																														
ZZZZZZ			09:53																														
CCV 440-95570/23	1		09:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-95570/24	1		09:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:00																														
ZZZZZZ			10:02																														
ZZZZZZ			10:04																														
ZZZZZZ			10:07																														
ZZZZZZ			10:09																														
240-22242-5	1	R	10:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22242-6	1	R	10:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22242-7	1	R	10:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22242-7 SD	5	R	10:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:20																														
ZZZZZZ			10:22																														
CCV 440-95570/36	1		10:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-95570/37	1		10:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/08/2013 14:33 End Date: 04/08/2013 17:29

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-96763/6-A	1		14:33	X
IC 440-96763/7-A	1		14:35	X
IC 440-96763/8-A	1		14:37	X
IC 440-96763/9-A	1		14:40	X
IC 440-96763/10-A	1		14:42	X
IC 440-96763/11-A	1		14:45	X
ICV 440-96763/1-A	1		14:48	X
ICB 440-96763/2-A	1		14:50	X
CRA 440-96763/5-A ✓	1		14:52	X
CCV 440-96763/3-A			15:31	
CCB 440-96763/4-A			15:34	
ZZZZZZ			15:38	
ZZZZZZ			15:40	
ZZZZZZ			15:42	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:55	
ZZZZZZ			15:57	
ZZZZZZ			16:00	
CCV 440-96763/3-A	1		16:02	X
CCB 440-96763/4-A	1		16:05	X
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
ZZZZZZ			16:17	
ZZZZZZ			16:19	
ZZZZZZ			16:22	
ZZZZZZ			16:24	
MB 440-96473/1-A	1	T	16:27	X
LCS 440-96473/2-A	1	T	16:29	X
CCV 440-96763/3-A	1		16:32	X
CCB 440-96763/4-A	1		16:34	X
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:42	
ZZZZZZ			16:44	
ZZZZZZ			16:47	
240-22161-D-3-C MS	1	T	16:49	X
240-22161-D-3-D MSD	1	T	16:52	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/08/2013 14:33 End Date: 04/08/2013 17:29

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
240-22242-5	1	T	16:54	X
240-22242-6	1	T	16:57	X
240-22242-7	1	T	16:59	X
CCV 440-96763/3-A	1		17:01	X
CCB 440-96763/4-A	1		17:04	X
ZZZZZZ			17:06	
ZZZZZZ			17:09	
ZZZZZZ			17:11	
ZZZZZZ			17:14	
ZZZZZZ			17:16	
ZZZZZZ			17:19	
ZZZZZZ			17:21	
CCV 440-96763/3-A			17:23	
CCB 440-96763/4-A			17:26	
CRA 440-96763/5-A	1		17:29	X

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/02/2013 End Date: 04/02/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-95570/1 IC	08:59	100		100		100		100		100	
STD1 440-95570/2 IC	09:01	100		100		100		100		100	
STD2 440-95570/3 IC	09:04	99		99		100		100		100	
STD3 440-95570/4 IC	09:06	98		100		101		100		101	
STD4 440-95570/5 IC	09:08	99		100		100		99		100	
ICV 440-95570/6	09:11	99		99		100		99		101	
ICB 440-95570/7	09:13	99		100		102		100		101	
CRI 440-95570/8	09:15	97		98		99		99		99	
CRI 440-95570/9	09:18	99		99		99		99		99	
ICSA 440-95570/10	09:20	86		95		95		92		91	
ICSAB 440-95570/11	09:22	84		95		95		92		92	
MB 440-95414/1-A	09:33	94		100		101		102		103	
LCS 440-95414/2-A	09:35	93		100		102		101		103	
440-42122-E-1-C MS	09:40	88		102		99		98		97	
440-42122-E-1-D MSD	09:42	89		101		99		99		98	
440-42122-E-1-B PDS	09:44	91		102		99		99		98	
CCV 440-95570/23	09:55	100		101		102		101		103	
CCB 440-95570/24	09:57	101		101		103		102		103	
240-22242-5	10:11	102		109		109		109		110	
240-22242-6	10:13	96		106		106		103		102	
240-22242-7	10:16	97		108		107		106		105	
240-22242-7 SD	10:18	101		109		109		108		109	
CCV 440-95570/36	10:30	100		102		104		103		105	
CCB 440-95570/37	10:32	97		103		104		103		105	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22242-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/02/2013 End Date: 04/02/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-95570/1 IC	08:59	100									
STD1 440-95570/2 IC	09:01	101									
STD2 440-95570/3 IC	09:04	100									
STD3 440-95570/4 IC	09:06	101									
STD4 440-95570/5 IC	09:08	101									
ICV 440-95570/6	09:11	101									
ICB 440-95570/7	09:13	101									
CRI 440-95570/8	09:15	99									
CRI 440-95570/9	09:18	101									
ICSA 440-95570/10	09:20	97									
ICSAB 440-95570/11	09:22	98									
MB 440-95414/1-A	09:33	103									
LCS 440-95414/2-A	09:35	105									
440-42122-E-1-C MS	09:40	103									
440-42122-E-1-D MSD	09:42	103									
440-42122-E-1-B PDS	09:44	103									
CCV 440-95570/23	09:55	104									
CCB 440-95570/24	09:57	106									
240-22242-5	10:11	113									
240-22242-6	10:13	106									
240-22242-7	10:16	108									
240-22242-7 SD	10:18	111									
CCV 440-95570/36	10:30	106									
CCB 440-95570/37	10:32	107									

Sample Report

Sample Table

Sample Name	240-22242-D-5-A
Data File Name	031SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1304
Acq Date Time	2013-04-02T10:11:38-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-95414 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Sample MRC-MW102B-032013 Be rep. result 16 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	16.071	16.071	1.04	111847	0.24	3000	
Na	23	1	No Gas	8940.989	8940.989	1.17	326935080	1.25	100000	
Mg	24	1	No Gas	3983.073	3983.073	0.94	97124274	0.85	112500	
Al	27	1	No Gas	158.880	158.880	0.68	5201916	0.79	4000	
K	39	1	No Gas	1199.840	1199.840	0.45	54231668	0.63	87500	
Ca	44	1	No Gas	3696.578	3696.578	0.62	4744556	0.51	225000	
V	51	1	No Gas	0.141	0.141	24.31	11218	16.80	4000	
Cr	52	1	No Gas	0.215	0.215	2.40	29986	0.63	4000	
Mn	55	1	No Gas	395.825	395.825	1.90	23631026	1.83	4000	
Fe	56	1	No Gas	423.912	423.912	2.48	23674015	2.11	40000	
Co	59	1	No Gas	448.555	448.555	1.57	21293876	1.53	4000	
Ni	60	1	No Gas	628.598	628.598	0.98	6892931	0.94	4000	
Cu	65	1	No Gas	2.722	2.722	2.56	37392	2.44	4000	
Zn	66	1	No Gas	763.179	763.179	0.94	5390227	1.06	2500	
As	75	1	No Gas	0.398	0.398	7.65	2507	8.67	4000	
Se	82	1	No Gas	0.679	0.679	16.74	293	17.71	4000	
Sr	88	1	No Gas	32.671	32.671	1.29	2000178	0.84	4000	
Mo	95	1	No Gas	0.024	0.024	10.92	501	4.53	4000	
[Mo]	98	1	No Gas	0.025	0.025	5.46	894	4.82	4000	
Ag	107	1	No Gas	0.009	0.009	9.03	269	9.63	100	
Cd	111	1	No Gas	1.193	1.193	4.93	7169	2.88	4000	
[Cd]	114	1	No Gas	1.242	1.242	3.23	16068	1.41	4000	
Sn	118	1	No Gas	0.088	0.088	8.48	2445	4.64	4000	
Sb	123	1	No Gas	0.097	0.097	5.66	2357	3.61	4000	
Ba	137	1	No Gas	49.060	49.060	1.35	430215	0.73	4000	
Ce	140	1	No Gas	3.811	3.811	2.00	296298	0.57	4000	
Tl	205	1	No Gas	0.140	0.140	3.25	6283	3.04	4000	
Pb	208	1	No Gas	0.419	0.419	1.97	27410	1.81	4000	
U	238	1	No Gas	0.288	0.288	1.33	17709	1.34	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	1358798	1.28	1336190	101.69	60	120	
Sc-45 (IS)	45	1	No Gas	4193455	0.22	3860647	108.62	60	120	
Ge (IS)	72	1	No Gas	869581	1.84	798006	108.97	60	120	
Ge (IS)	74	1	No Gas	1212153	1.59	1113827	108.83	60	120	
In-115 (IS)	115	1	No Gas	5081044	1.96	4632466	109.68	60	120	
Tb-159 (IS)	159	1	No Gas	6403377	0.04	5683169	112.67	60	120	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **April 24, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOC, OVG, SELECT METALS, PERCHLORATE, ALKALINITY, AMMONIA-N, CHLORIDE, DOC, NITRATE-N, NITRITE-N, ORTHOPHOSPHATE-P, SILICON DIOXIDE, SULFATE, AND TDS LOCKHEED-MIDDLE RIVER COMPLEX (MRC)**
SDG 240-22303-1

SAMPLES: 10/Aqueous/

MRC-MW104A-032113	MRC-MW104B-032113
MRC-MW34B-032113	MRC-MW34C-032113
MRC-MW37B-032113	MRC-MW37C-032113
MRC-MW74A-032113	MRC-MW74B-032113
MRC-MW93A-032113	TB-032113

Overview

The sample set for Lockheed MRC, SDG 240-22303-1, consists of nine (9) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for volatile organic compounds (VOCs). Samples MRC-MW34B-032113 and MRC-MW37B-032113 were analyzed for organic volatile gases (OVG), alkalinity, ammonia-N, chloride, dissolved organic carbon (DOC), nitrate-N, nitrite-N, orthophosphate-P, silicon dioxide, sulfate, and total dissolved solids (TDS). Samples MRC-MW104B-032113, MRC-MW34B-032113, MRC-MW37B-032113, and MRC-MW93A-032113 were analyzed for select metals. Samples MRC-MW74A-032113 and MRC-MW74B-032113 were analyzed for perchlorate. The samples were collected by Tetra Tech March 21st, 2013 and analyzed by TestAmerica. VOC analyses were conducted using method 8260B. OVG analyses were conducted using method RSK-175. Metals analyses were conducted using methods 6010B and 6020A. Mercury analyses were conducted using method 7471B. Perchlorate analyses were conducted using method 6850. Alkalinity analyses were conducted using method 310.1. Ammonia-n analyses were conducted using method 350.3. Chloride, nitrate-N, nitrite-N, orthophosphate-P, and sulfate analyses were conducted using method 300.0. DOC analyses were conducted using method 9060. Silicon dioxide analyses were conducted using method 6010C. TDS analyses were conducted using method 160.1.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, GC/MS tuning, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, surrogate standard recoveries, laboratory control sample recoveries, matrix spike recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- The initial calibration analyzed on 2/11/13 on instrument A3UX10 had a relative response factor (RRF) <0.05 for tertiary butyl alcohol and vinyl acetate. Samples MRC-MW104A-032113, MRC-

MW104B-032113, MRC-MW37B-032113, MRC-MW37C-032113, MRC-MW74A-032113, MRC-MW74B-032113, and MRC-MW93A-032113 were affected. The non-detected results were qualified as rejected (UR).

- The continuing calibration analyzed on 4/1/13 at 12:15 on instrument A3UX10 had a relative response factor (RRF) <0.05 for tertiary butyl alcohol and vinyl acetate. Samples MRC-MW104A-032113, MRC-MW104B-032113, MRC-MW37B-032113, MRC-MW37C-032113, MRC-MW74A-032113, MRC-MW74B-032113, and MRC-MW93A-032113 were affected. The non-detected results were qualified as rejected (UR).

- The initial calibration analyzed on 2/10/13 on instrument A3UX15 had a relative response factor (RRF) <0.05 for tertiary butyl alcohol and vinyl acetate. Samples MRC-MW34B-032113, MRC-MW34C-032113, and TB-032113 were affected. The non-detected results were qualified as rejected (UR).

- The continuing calibration analyzed on 3/30/13 at 9:00 on instrument A3UX15 had a relative response factor (RRF) <0.05 for tertiary butyl alcohol and vinyl acetate. Samples MRC-MW34B-032113, MRC-MW34C-032113, and TB-032113 were affected. The non-detected results were qualified as rejected (UR).

Minor Problems-

- The following contaminants were detected in method and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Acetone [1]	2.6 ug/L	26 ug/L
Acetone [2]	2.82 ug/L	28.2 ug/L
Hexachlorobutadiene [2]	0.54 ug/L	2.7 ug/L
Naphthalene [3]	0.54 ug/L	2.7 ug/L
1,2,3-Trichlorobenzne [3]	0.18 ug/L	0.9 ug/L
Calcium [4]	139 ug/L	695 ug/L
Magnesium [4]	39.8 ug/L	199 ug/L
Manganese [4]	2.06 ug/L	10.3 ug/L
Molybdenum [5]	1.0 ug/L	5.0 ug/L
Silica Dioxide [6]	19.6 ug/L	98 ug/L
Silver [7]	0.24 ug/L	1.2 ug/L
Chloride [8]	0.15 mg/L	0.75 mg/L
Ammonia [9]	0.043 mg/L	0.21 mg/L

[1] Maximum concentration found in a trip blank.
[2] Maximum concentration found in a preparation blank affecting samples in 240-79987.
[3] Maximum concentration found in a preparation blank affecting samples in 240-80086.
[4] Maximum concentration found in a preparation blank affecting samples in 240-79873.
[5] Maximum concentration found in a preparation blank affecting samples in 240-96231.
[6] Maximum concentration found in a calibration blank affecting samples analyzed on 4/4/13.
[7] Maximum concentration found in a calibration blank affecting samples analyzed on 4/5/13.
[8] Maximum concentration found in a preparation blank affecting samples in 240-79203.
[9] Maximum concentration found in a calibration blank affecting samples analyzed on 4/1/13.

An action level of 5X and 10X (Acetone only) the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The continuing calibration standard analyzed on 4/1/13 on instrument A3UX10 had a percent difference > 20% for trichlorofluoromethane, tert-butyl alcohol, 2-butanone, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, 2-hexanone, 1,2,4-trichlorobenzene, naphthalene, and 1,2,3-trichlorobenzene. Samples MRC-MW104A-032113, MRC-MW104B-032113, MRC-MW37B-032113, MRC-MW37C-032113, MRC-MW74A-032113, MRC-MW74B-032113, and MRC-MW93A-032113 were affected. Non-detected results were qualified as estimated (J).

- The continuing calibration standard analyzed on 3/30/13 on instrument A3UX15 had a percent difference > 20% for tert-butyl alcohol, bromomethane, acetone, 2,2-dichloropropane, and 2-hexanone. Samples MRC-MW34B-032113, MRC-MW34C-032113, and TB-032113 were affected. Positive results were qualified as estimated (J). Non-detected results were qualified as estimated (J).

- The laboratory control spike for preparation batch 240-80086 had a percent recovery less than the lower control limit for tert-butyl alcohol and 1,2,3-trichlorobenzene. Sample MRC-MW104A-032113, MRC-MW104B-032113, MRC-MW37B-032113, MRC-MW37C-032113, MRC-MW74A-032113, MRC-MW74B-032113, and MRC-MW93A-032113 were affected. No validation action was taken for tert-butyl alcohol as sample results were rejected for calibration non-compliances. Non-detected 1,2,3-trichlorobenzene results were qualified as estimated (J) due to conflicting directional bias.

- The CRDL standard analyzed on 4/8/13 had a percent recovery < 90% for mercury. Samples MRC-MW104B-032113, MRC-MW34B-032113, and MRC-MW93A-032113 were affected. Non-detected results were qualified as biased low (UL).

- The CRDL standard analyzed on 4/5/13 had a percent recovery >110% for copper, nickel, selenium, and silver. Samples MRC-MW104B-032113, MRC-MW34B-032113, and MRC-MW93A-032113 were affected. Positive selenium results were qualified as biased high (K) and estimated (J) due to conflicting directional bias. Silver results were qualified as sample results were previously qualified for blank contamination or were non-detected.

- Interference standard analyzed on 4/5/13 had a percent recovery >120% for zinc. Samples MRC-MW104B-032113, MRC-MW34B-032113, and MRC-MW93A-032113 were affected. Positive results were qualified as biased high (K).

Notes

Samples MRC-MW74A-032113 (40X) and MRC-MW74B-032113 (1250X) were analyzed at dilutions for VOC analyses due to high trichloroethene results.

The laboratory control spike for preparation batch 240-79987 had a percent recovery greater than the upper control limit for tert-butyl alcohol. Sample MRC-MW34B-032113, MRC-MW34C-032113, and TB-032113 were affected. No validation action was taken as sample results were rejected for calibration non-compliances. Positive results greater than MDL but less than the RL were qualified as estimated (J).
The continuing calibration 3/22/13 had a percent recovery > 110% for nitrite-N and orthophosphate-P. Samples MRC-MW34B-032113 and MRC-MW37B-032113 were affected. No validation action was

warranted as sample results were non-detected.

The continuing calibration analyzed on 3/22/13 had a percent recovery > 110% for nitrite-N and orthophosphate-P. Samples MRC-MW34B-032113 and MRC-MW37B-032113 were affected. No validation action was warranted as sample results were non-detected.

Non-detected results were reported at the MDL.

TICs were also analyzed for VOC analyses.

Executive Summary

Laboratory Performance: Calibration and preparation blank contamination resulted in the qualification of sample results. VOC initial and continuing calibration non-compliances resulted in the qualification of sample results. VOC laboratory spike percent recovery non-compliances resulted in the qualification of sample results. CRDL standard non-compliances for selenium resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Interference standard non-compliances for zinc resulted in the qualification of sample results.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993) and U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW104A-032113			MRC-MW104B-032113			MRC-MW34B-032113			MRC-MW34C-032113		
SDG: 240-22303-1	LAB_ID	240-22303-6			240-22303-7			240-22303-2			240-22303-3		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.77	J	P	0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.29	J	P	0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	UJ	CE	0.17	UJ	CE	0.17	U		0.17	UJ	CE
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	UJ	C	0.15	UJ	C	0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	UJ	C	0.13	UJ	C	0.13	U	
2-BUTANONE		0.57	UJ	C	0.57	UJ	C	0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	UJ	C	0.99	UJ	C	0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	UJ	C	0.41	UJ	C	0.41	UJ	C	0.41	UJ	C
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	UJ	C	0.32	UJ	C	0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U		1.1	UJ	C	1.1	UJ	C
BENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	UJ	C	0.41	UJ	C	0.41	U	
BUTANE, 2-METHYL-								1.9	NJ	Z1			

PROJ_NO: 04795	NSAMPLE	MRC-MW37B-032113			MRC-MW37C-032113			MRC-MW74A-032113			MRC-MW74B-032113		
SDG: 240-22303-1	LAB_ID	240-22303-8			240-22303-9			240-22303-4			240-22303-5		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		9.2	U		290	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		8.8	U		280	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		7.2	U		230	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		11	U		350	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		6	U		190	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		7.6	U		240	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		5.2	U		160	U	
1,2,3-TRICHLOROBENZENE		0.17	UJ	CE	0.17	UJ	CE	6.8	UJ	CE	210	UJ	CE
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		17	U		540	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.24	U		7.4	U	
1,2,4-TRICHLOROBENZENE		0.15	UJ	C	0.15	UJ	C	6	UJ	C	190	UJ	C
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		4.8	U		150	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		27	U		840	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		9.6	U		300	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		5.2	U		160	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		8.8	U		280	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		7.2	U		230	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		5.6	U		180	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		6.4	U		200	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		5.2	U		160	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		5.2	U		160	U	
2-BUTANONE		0.57	UJ	C	0.57	UJ	C	23	UJ	C	710	UJ	C
2-CHLOROETHYL VINYL ETHER		0.99	UJ	C	0.99	UJ	C	40	UJ	C	1200	UJ	C
2-CHLOROTOLUENE		0.11	U		0.11	U		4.4	U		140	U	
2-HEXANONE		0.41	UJ	C	0.41	UJ	C	16	UJ	C	510	UJ	C
4-CHLOROTOLUENE		0.18	U		0.18	U		7.2	U		230	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		4.8	U		150	U	
4-METHYL-2-PENTANONE		0.32	UJ	C	0.32	UJ	C	13	UJ	C	400	UJ	C
ACETONE		1.1	U		1.1	U		55	J	P	1900	J	P
BENZENE		0.13	U		0.13	U		5.2	U		160	U	
BROMOBENZENE		0.13	U		0.13	U		5.2	U		160	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		12	U		360	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		6	U		190	U	
BROMOFORM		0.64	U		0.64	U		26	U		800	U	
BROMOMETHANE		0.41	U		0.41	U		16	U		510	U	
BUTANE, 2-METHYL-													

PROJ_NO: 04795	NSAMPLE	MRC-MW93A-032113			TB-032113		
SDG: 240-22303-1	LAB_ID	240-22303-10			240-22303-1		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	UJ	CE	0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	UJ	C	0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	UJ	C
2-BUTANONE		0.57	UJ	C	0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	UJ	C	0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U	
2-HEXANONE		0.41	UJ	C	0.41	UJ	C
4-CHLOROTOLUENE		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	UJ	C	0.32	U	
ACETONE		1.1	B	A	2.6	J	CP
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	UJ	C
BUTANE, 2-METHYL-							

PROJ_NO: 04795	NSAMPLE	MRC-MW104A-032113			MRC-MW104B-032113			MRC-MW34B-032113			MRC-MW34C-032113		
SDG: 240-22303-1	LAB_ID	240-22303-6			240-22303-7			240-22303-2			240-22303-3		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		6.3			0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		1.8			0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		18			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
FORMAMIDE, N-METHYLTHIO		1.3	NJ	Z1									
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		21			0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	UJ	C	0.24	UJ	C	0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
SILANOL, TRIMETHYL-													
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERT-BUTYLDIMETHYLSILANOL													
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW37B-032113			MRC-MW37C-032113			MRC-MW74A-032113			MRC-MW74B-032113		
SDG: 240-22303-1	LAB_ID	240-22303-8			240-22303-9			240-22303-4			240-22303-5		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		5.2	U		160	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		5.2	U		160	U	
CHLOROBENZENE		0.15	U		0.15	U		6	U		190	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		7.2	U		230	U	
CHLOROETHANE		0.29	U		0.29	U		12	U		360	U	
CHLOROFORM		0.16	U		0.16	U		6.4	U		200	U	
CHLOROMETHANE		0.3	U		0.3	U		12	U		380	U	
CIS-1,2-DICHLOROETHENE		3.7			0.17	U		29	J	P	410	J	P
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		5.6	U		180	U	
DIBROMOMETHANE		0.28	U		0.28	U		11	U		350	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		12	U		390	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		60	U		1900	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		4.4	U		140	U	
ETHYLBENZENE		0.17	U		0.17	U		6.8	U		210	U	
FORMAMIDE, N-METHYLTHIO													
HEXACHLOROBUTADIENE		0.3	U		0.3	U		12	U		380	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		5.2	U		160	U	
M+P-XYLENES		0.24	U		0.24	U		9.6	U		300	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		6.8	U		210	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		18	B	A	410	U	
NAPHTHALENE		0.24	UJ	C	0.24	UJ	C	9.6	UJ	C	300	UJ	C
N-BUTYLBENZENE		0.12	U		0.12	U		4.8	U		150	U	
N-PROPYLBENZENE		0.14	U		0.14	U		5.6	U		180	U	
O-XYLENE		0.14	U		0.14	U		5.6	U		180	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		5.2	U		160	U	
SILANOL, TRIMETHYL-		2.9	R	Z2									
STYRENE		0.11	U		0.11	U		4.4	U		140	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		2.7	U		84	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		5.2	U		160	U	
TERT-BUTYLDIMETHYLSILANOL					1	R	Z2						
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	160	UR	C	4900	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		12	U		360	U	
TOLUENE		0.13	U		0.13	U		5.2	U		160	U	
TOTAL XYLENES		0.28	U		0.28	U		11	U		350	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		7.6	U		240	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		7.6	U		240	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW93A-032113			TB-032113		
SDG: 240-22303-1	LAB_ID	240-22303-10			240-22303-1		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		1.4			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U	
FORMAMIDE, N-METHYLTHIO							
HEXACHLOROBUTADIENE		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U	
NAPHTHALENE		0.24	UJ	C	0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
SILANOL, TRIMETHYL-							
STYRENE		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U	
TERT-BUTYLDIMETHYLSILANOL							
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW104A-032113			MRC-MW104B-032113			MRC-MW34B-032113			MRC-MW34C-032113		
SDG: 240-22303-1	LAB_ID	240-22303-6			240-22303-7			240-22303-2			240-22303-3		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		0.17	U		0.17	U		19			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	UJ	C	0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		2.7			0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW37B-032113			MRC-MW37C-032113			MRC-MW74A-032113			MRC-MW74B-032113		
SDG: 240-22303-1	LAB_ID	240-22303-8			240-22303-9			240-22303-4			240-22303-5		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		21			0.46	J	P	1400			40000		
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	UJ	C	8.4	UJ	C	260	UJ	C
VINYL ACETATE		0.19	UR	C	0.19	UR	C	7.6	UR	C	240	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		8.8	U		280	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW93A-032113			TB-032113		
SDG: 240-22303-1	LAB_ID	240-22303-10			240-22303-1		
FRACTION: OV	SAMP_DATE	3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		1.7			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW34B-032113			MRC-MW37B-032113		
SDG: 240-22303-1	LAB_ID	240-22303-2			240-22303-8		
FRACTION: OVG	SAMP_DATE	3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.22	J	P	0.1	U	
ETHENE		0.37	U		0.37	U	
METHANE		49			0.35	J	P

PROJ_NO: 04795	NSAMPLE	MRC-MW104B-032113			MRC-MW34B-032113			MRC-MW37B-032113			MRC-MW93A-032113		
SDG: 240-22303-1	LAB_ID	240-22303-7			240-22303-2			240-22303-8			240-22303-10		
FRACTION: M	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U					0.3	U	
ARSENIC		0.9	U		0.9	U					0.9	U	
BARIUM		59			160						180		
BERYLLIUM		11			11						35		
CADMIUM		0.65	J	P	0.39	J	P				2.3		
CALCIUM					13000			18000					
CHROMIUM		2.3			0.9	U					4.7		
COBALT		72			110						1900		
COPPER		13			30						39		
IRON					290			390					
LEAD		0.21	J	P	0.26	J	P				2.2		
MAGNESIUM					12000			3900	J	P			
MANGANESE					420			37					
MERCURY		0.1	UL	C	0.1	UL	C				0.1	UL	C
MOLYBDENUM		1.1	B	A	0.72	B	A				1.3	B	A
NICKEL		79			150						1800		
POTASSIUM					6400			3100	J	p			
SELENIUM		2.8	J	CP	0.79	J	CP				6.3	K	C
SILICON DIOXIDE					9100			10000					
SILVER		0.39	B	A	0.32	B	A				0.1	U	
SODIUM					71000			12000					
THALLIUM		0.2	U		0.36	J	P				0.2	U	
VANADIUM		0.8	U		0.83	J	P				3.2	J	P
ZINC		240	K	K	310	K	K				1300	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW34B-032113			MRC-MW37B-032113			MRC-MW74A-032113			MRC-MW74B-032113		
SDG: 240-22303-1	LAB_ID	240-22303-2			240-22303-8			240-22303-4			240-22303-5		
FRACTION: MISC	SAMP_DATE	3/21/2013			3/21/2013			3/21/2013			3/21/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		3.5	J	P	42								
AMMONIA-N		0.083	B	A	0.038	B	A						
CHLORIDE		160			20								
DISSOLVED ORGANIC CARBON		1.6			3.8								
NITRATE-N		0.37			0.61								
NITRITE-N		0.012	U		0.012	U							
ORTHOPHOSPHATE-P		0.044	U		0.044	U							
PERCHLORATE								0.082	U		0.28	J	P
SULFATE		18			21								
TOTAL DISSOLVED SOLIDS		540			110								

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104A-032113 | Lab Sample ID: 240-22303-6

Matrix: Water | Lab File ID: UXX3025.D

Analysis Method: 8260B | Date Collected: 03/21/2013 10:53

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 17:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104A-032113 | Lab Sample ID: 240-22303-6

Matrix: Water | Lab File ID: UXX3025.D

Analysis Method: 8260B | Date Collected: 03/21/2013 10:53

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 17:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U *	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104A-032113 Lab Sample ID: 240-22303-6

Matrix: Water Lab File ID: UXX3025.D

Analysis Method: 8260B Date Collected: 03/21/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 17:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	73		63-129
2037-26-5	Toluene-d8 (Surr)	82		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104A-032113 Lab Sample ID: 240-22303-6

Matrix: Water Lab File ID: UXX3025.D

Analysis Method: 8260B Date Collected: 03/21/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 17:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.3

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1000196-87-7	Formamide, N-methylthio	4.12	1.3	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104B-032113 | Lab Sample ID: 240-22303-7

Matrix: Water | Lab File ID: UXX3026.D

Analysis Method: 8260B | Date Collected: 03/21/2013 11:49

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104B-032113 | Lab Sample ID: 240-22303-7

Matrix: Water | Lab File ID: UXX3026.D

Analysis Method: 8260B | Date Collected: 03/21/2013 11:49

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U *	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104B-032113 | Lab Sample ID: 240-22303-7

Matrix: Water | Lab File ID: UXX3026.D

Analysis Method: 8260B | Date Collected: 03/21/2013 11:49

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 17:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	74		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW104B-032113 Lab Sample ID: 240-22303-7

Matrix: Water Lab File ID: UXX3026.D

Analysis Method: 8260B Date Collected: 03/21/2013 11:49

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 17:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Matrix: Water Lab File ID: UXC0307.D

Analysis Method: 8260B Date Collected: 03/21/2013 10:35

Sample wt/vol: 5(mL) Date Analyzed: 03/30/2013 18:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79987 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	6.3		1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.8		1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	18		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	0.77	J	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.29	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34B-032113 | Lab Sample ID: 240-22303-2

Matrix: Water | Lab File ID: UXC0307.D

Analysis Method: 8260B | Date Collected: 03/21/2013 10:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 18:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	21		1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	19		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	2.7		1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34B-032113 | Lab Sample ID: 240-22303-2

Matrix: Water | Lab File ID: UXC0307.D

Analysis Method: 8260B | Date Collected: 03/21/2013 10:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 18:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	93		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34B-032113 | Lab Sample ID: 240-22303-2

Matrix: Water | Lab File ID: UXC0307.D

Analysis Method: 8260B | Date Collected: 03/21/2013 10:35

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 18:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 1.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
78-78-4	Butane, 2-methyl-	1.72	1.9	T J N

FORM I-TIC 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34C-032113 | Lab Sample ID: 240-22303-3

Matrix: Water | Lab File ID: UXC0308.D

Analysis Method: 8260B | Date Collected: 03/21/2013 12:05

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34C-032113 | Lab Sample ID: 240-22303-3

Matrix: Water | Lab File ID: UXC0308.D

Analysis Method: 8260B | Date Collected: 03/21/2013 12:05

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34C-032113 | Lab Sample ID: 240-22303-3

Matrix: Water | Lab File ID: UXC0308.D

Analysis Method: 8260B | Date Collected: 03/21/2013 12:05

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	82		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34C-032113 Lab Sample ID: 240-22303-3

Matrix: Water Lab File ID: UXC0308.D

Analysis Method: 8260B Date Collected: 03/21/2013 12:05

Sample wt/vol: 5(mL) Date Analyzed: 03/30/2013 18:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79987 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37B-032113 | Lab Sample ID: 240-22303-8

Matrix: Water | Lab File ID: UXX3027.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	3.7		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37B-032113 | Lab Sample ID: 240-22303-8

Matrix: Water | Lab File ID: UXX3027.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U *	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	21		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37B-032113 | Lab Sample ID: 240-22303-8

Matrix: Water | Lab File ID: UXX3027.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	98		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	74		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37B-032113 | Lab Sample ID: 240-22303-8

Matrix: Water | Lab File ID: UXX3027.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 2.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.12	2.9	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37C-032113 Lab Sample ID: 240-22303-9

Matrix: Water Lab File ID: UXX3028.D

Analysis Method: 8260B Date Collected: 03/21/2013 15:41

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 18:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37C-032113 | Lab Sample ID: 240-22303-9

Matrix: Water | Lab File ID: UXX3028.D

Analysis Method: 8260B | Date Collected: 03/21/2013 15:41

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U *	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.46	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37C-032113 | Lab Sample ID: 240-22303-9

Matrix: Water | Lab File ID: UXX3028.D

Analysis Method: 8260B | Date Collected: 03/21/2013 15:41

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	95		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	72		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37C-032113 | Lab Sample ID: 240-22303-9

Matrix: Water | Lab File ID: UXX3028.D

Analysis Method: 8260B | Date Collected: 03/21/2013 15:41

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
18173-64-3	tert-Butyldimethylsilanol	4.12	1.0	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74A-032113 | Lab Sample ID: 240-22303-4

Matrix: Water | Lab File ID: UXX3020.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 15:29

Soil Aliquot Vol: | Dilution Factor: 40

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	55	J B	200	44
71-43-2	Benzene	40	U	40	5.2
108-86-1	Bromobenzene	40	U	40	5.2
74-97-5	Bromochloromethane	40	U	40	12
75-27-4	Bromodichloromethane	40	U	40	6.0
75-25-2	Bromoform	40	U	40	26
74-83-9	Bromomethane	40	U	40	16
78-93-3	2-Butanone	200	U	200	23
75-15-0	Carbon disulfide	40	U	40	5.2
56-23-5	Carbon tetrachloride	40	U	40	5.2
108-90-7	Chlorobenzene	40	U	40	6.0
75-00-3	Chloroethane	40	U	40	12
110-75-8	2-Chloroethyl vinyl ether	400	U	400	40
67-66-3	Chloroform	40	U	40	6.4
74-87-3	Chloromethane	40	U	40	12
95-49-8	2-Chlorotoluene	40	U	40	4.4
106-43-4	4-Chlorotoluene	40	U	40	7.2
156-59-2	cis-1,2-Dichloroethene	29	J	40	6.8
10061-01-5	cis-1,3-Dichloropropene	40	U	40	5.6
124-48-1	Dibromochloromethane	40	U	40	7.2
96-12-8	1,2-Dibromo-3-Chloropropane	200	U	200	27
106-93-4	1,2-Dibromoethane	40	U	40	9.6
74-95-3	Dibromomethane	40	U	40	11
95-50-1	1,2-Dichlorobenzene	40	U	40	5.2
541-73-1	1,3-Dichlorobenzene	40	U	40	5.6
106-46-7	1,4-Dichlorobenzene	40	U	40	5.2
75-71-8	Dichlorodifluoromethane	40	U	40	12
75-34-3	1,1-Dichloroethane	40	U	40	6.0
107-06-2	1,2-Dichloroethane	40	U	40	8.8
75-35-4	1,1-Dichloroethene	40	U	40	7.6
78-87-5	1,2-Dichloropropane	40	U	40	7.2
142-28-9	1,3-Dichloropropane	40	U	40	6.4
594-20-7	2,2-Dichloropropane	40	U	40	5.2
563-58-6	1,1-Dichloropropene	40	U	40	5.2
108-20-3	Diisopropyl ether	200	U	200	60
100-41-4	Ethylbenzene	40	U	40	6.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74A-032113 | Lab Sample ID: 240-22303-4

Matrix: Water | Lab File ID: UXX3020.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 15:29

Soil Aliquot Vol: | Dilution Factor: 40

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	200	U	200	4.4
87-68-3	Hexachlorobutadiene	40	U	40	12
591-78-6	2-Hexanone	200	U	200	16
98-82-8	Isopropylbenzene	40	U	40	5.2
75-09-2	Methylene Chloride	18	J	40	13
108-10-1	4-Methyl-2-pentanone	200	U	200	13
1634-04-4	Methyl tert-butyl ether	40	U	40	6.8
179601-23-1	m-Xylene & p-Xylene	80	U	80	9.6
91-20-3	Naphthalene	40	U	40	9.6
104-51-8	n-Butylbenzene	40	U	40	4.8
103-65-1	n-Propylbenzene	40	U	40	5.6
95-47-6	o-Xylene	40	U	40	5.6
99-87-6	p-Isopropyltoluene	40	U	40	4.8
135-98-8	sec-Butylbenzene	40	U	40	5.2
100-42-5	Styrene	40	U	40	4.4
994-05-8	Tert-amyl-methyl ether (TAME)	200	U	200	2.7
75-65-0	tert-Butyl alcohol	800	U *	800	160
98-06-6	tert-Butylbenzene	40	U	40	5.2
630-20-6	1,1,1,2-Tetrachloroethane	40	U	40	9.2
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	7.2
127-18-4	Tetrachloroethene	40	U	40	12
108-88-3	Toluene	40	U	40	5.2
156-60-5	trans-1,2-Dichloroethene	40	U	40	7.6
10061-02-6	trans-1,3-Dichloropropene	40	U	40	7.6
87-61-6	1,2,3-Trichlorobenzene	40	U *	40	6.8
120-82-1	1,2,4-Trichlorobenzene	40	U	40	6.0
71-55-6	1,1,1-Trichloroethane	40	U	40	8.8
79-01-6	Trichloroethene	1400		40	6.8
75-69-4	Trichlorofluoromethane	40	U	40	8.4
96-18-4	1,2,3-Trichloropropane	40	U	40	17
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	40	U	40	11
526-73-8	1,2,3-Trimethylbenzene	200	U	200	0.24
95-63-6	1,2,4-Trimethylbenzene	40	U	40	4.8
108-05-4	Vinyl acetate	80	U	80	7.6
75-01-4	Vinyl chloride	40	U	40	8.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74A-032113 | Lab Sample ID: 240-22303-4

Matrix: Water | Lab File ID: UXX3020.D

Analysis Method: 8260B | Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 15:29

Soil Aliquot Vol: | Dilution Factor: 40

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	80	U	80	11

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	95		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	73		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74A-032113 Lab Sample ID: 240-22303-4

Matrix: Water Lab File ID: UXX3020.D

Analysis Method: 8260B Date Collected: 03/21/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 15:29

Soil Aliquot Vol: Dilution Factor: 40

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74B-032113 | Lab Sample ID: 240-22303-5

Matrix: Water | Lab File ID: UXX3034.D

Analysis Method: 8260B | Date Collected: 03/21/2013 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 20:33

Soil Aliquot Vol: | Dilution Factor: 1250

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1900	J B	6300	1400
71-43-2	Benzene	1300	U	1300	160
108-86-1	Bromobenzene	1300	U	1300	160
74-97-5	Bromochloromethane	1300	U	1300	360
75-27-4	Bromodichloromethane	1300	U	1300	190
75-25-2	Bromoform	1300	U	1300	800
74-83-9	Bromomethane	1300	U	1300	510
78-93-3	2-Butanone	6300	U	6300	710
75-15-0	Carbon disulfide	1300	U	1300	160
56-23-5	Carbon tetrachloride	1300	U	1300	160
108-90-7	Chlorobenzene	1300	U	1300	190
75-00-3	Chloroethane	1300	U	1300	360
110-75-8	2-Chloroethyl vinyl ether	13000	U	13000	1200
67-66-3	Chloroform	1300	U	1300	200
74-87-3	Chloromethane	1300	U	1300	380
95-49-8	2-Chlorotoluene	1300	U	1300	140
106-43-4	4-Chlorotoluene	1300	U	1300	230
156-59-2	cis-1,2-Dichloroethene	410	J	1300	210
10061-01-5	cis-1,3-Dichloropropene	1300	U	1300	180
124-48-1	Dibromochloromethane	1300	U	1300	230
96-12-8	1,2-Dibromo-3-Chloropropane	6300	U	6300	840
106-93-4	1,2-Dibromoethane	1300	U	1300	300
74-95-3	Dibromomethane	1300	U	1300	350
95-50-1	1,2-Dichlorobenzene	1300	U	1300	160
541-73-1	1,3-Dichlorobenzene	1300	U	1300	180
106-46-7	1,4-Dichlorobenzene	1300	U	1300	160
75-71-8	Dichlorodifluoromethane	1300	U	1300	390
75-34-3	1,1-Dichloroethane	1300	U	1300	190
107-06-2	1,2-Dichloroethane	1300	U	1300	280
75-35-4	1,1-Dichloroethene	1300	U	1300	240
78-87-5	1,2-Dichloropropane	1300	U	1300	230
142-28-9	1,3-Dichloropropane	1300	U	1300	200
594-20-7	2,2-Dichloropropane	1300	U	1300	160
563-58-6	1,1-Dichloropropene	1300	U	1300	160
108-20-3	Diisopropyl ether	6300	U	6300	1900
100-41-4	Ethylbenzene	1300	U	1300	210

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74B-032113 | Lab Sample ID: 240-22303-5

Matrix: Water | Lab File ID: UXX3034.D

Analysis Method: 8260B | Date Collected: 03/21/2013 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 20:33

Soil Aliquot Vol: | Dilution Factor: 1250

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	6300	U	6300	140
87-68-3	Hexachlorobutadiene	1300	U	1300	380
591-78-6	2-Hexanone	6300	U	6300	510
98-82-8	Isopropylbenzene	1300	U	1300	160
75-09-2	Methylene Chloride	1300	U	1300	410
108-10-1	4-Methyl-2-pentanone	6300	U	6300	400
1634-04-4	Methyl tert-butyl ether	1300	U	1300	210
179601-23-1	m-Xylene & p-Xylene	2500	U	2500	300
91-20-3	Naphthalene	1300	U	1300	300
104-51-8	n-Butylbenzene	1300	U	1300	150
103-65-1	n-Propylbenzene	1300	U	1300	180
95-47-6	o-Xylene	1300	U	1300	180
99-87-6	p-Isopropyltoluene	1300	U	1300	150
135-98-8	sec-Butylbenzene	1300	U	1300	160
100-42-5	Styrene	1300	U	1300	140
994-05-8	Tert-amyl-methyl ether (TAME)	6300	U	6300	84
75-65-0	tert-Butyl alcohol	25000	U *	25000	4900
98-06-6	tert-Butylbenzene	1300	U	1300	160
630-20-6	1,1,1,2-Tetrachloroethane	1300	U	1300	290
79-34-5	1,1,2,2-Tetrachloroethane	1300	U	1300	230
127-18-4	Tetrachloroethene	1300	U	1300	360
108-88-3	Toluene	1300	U	1300	160
156-60-5	trans-1,2-Dichloroethene	1300	U	1300	240
10061-02-6	trans-1,3-Dichloropropene	1300	U	1300	240
87-61-6	1,2,3-Trichlorobenzene	1300	U *	1300	210
120-82-1	1,2,4-Trichlorobenzene	1300	U	1300	190
71-55-6	1,1,1-Trichloroethane	1300	U	1300	280
79-01-6	Trichloroethene	40000		1300	210
75-69-4	Trichlorofluoromethane	1300	U	1300	260
96-18-4	1,2,3-Trichloropropane	1300	U	1300	540
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1300	U	1300	350
526-73-8	1,2,3-Trimethylbenzene	6300	U	6300	7.4
95-63-6	1,2,4-Trimethylbenzene	1300	U	1300	150
108-05-4	Vinyl acetate	2500	U	2500	240
75-01-4	Vinyl chloride	1300	U	1300	280

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74B-032113 | Lab Sample ID: 240-22303-5

Matrix: Water | Lab File ID: UXX3034.D

Analysis Method: 8260B | Date Collected: 03/21/2013 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 20:33

Soil Aliquot Vol: | Dilution Factor: 1250

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2500	U	2500	350

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	99		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	74		63-129
2037-26-5	Toluene-d8 (Surr)	76		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74B-032113 | Lab Sample ID: 240-22303-5

Matrix: Water | Lab File ID: UXX3034.D

Analysis Method: 8260B | Date Collected: 03/21/2013 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 20:33

Soil Aliquot Vol: | Dilution Factor: 1250

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW93A-032113 | Lab Sample ID: 240-22303-10

Matrix: Water | Lab File ID: UXX3029.D

Analysis Method: 8260B | Date Collected: 03/21/2013 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.1	J B	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW93A-032113 | Lab Sample ID: 240-22303-10

Matrix: Water | Lab File ID: UXX3029.D

Analysis Method: 8260B | Date Collected: 03/21/2013 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U *	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.7		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW93A-032113 Lab Sample ID: 240-22303-10

Matrix: Water Lab File ID: UXX3029.D

Analysis Method: 8260B Date Collected: 03/21/2013 16:00

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 18:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	102		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	73		63-129
2037-26-5	Toluene-d8 (Surr)	76		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW93A-032113 | Lab Sample ID: 240-22303-10

Matrix: Water | Lab File ID: UXX3029.D

Analysis Method: 8260B | Date Collected: 03/21/2013 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 18:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: TB-032113 | Lab Sample ID: 240-22303-1

Matrix: Water | Lab File ID: UXC0306.D

Analysis Method: 8260B | Date Collected: 03/21/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	2.6	J B	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: TB-032113 | Lab Sample ID: 240-22303-1

Matrix: Water | Lab File ID: UXC0306.D

Analysis Method: 8260B | Date Collected: 03/21/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: TB-032113 | Lab Sample ID: 240-22303-1

Matrix: Water | Lab File ID: UXC0306.D

Analysis Method: 8260B | Date Collected: 03/21/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: TB-032113 Lab Sample ID: 240-22303-1

Matrix: Water Lab File ID: UXC0306.D

Analysis Method: 8260B Date Collected: 03/21/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/30/2013 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79987 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Matrix: Water Lab File ID: Z0032617.D

Analysis Method: RSK-175 Date Collected: 03/21/2013 10:35

Sample wt/vol: 17(mL) Date Analyzed: 03/26/2013 15:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79468 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.22	J	0.50	0.10
74-82-8	Methane	49		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	95		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW37B-032113 Lab Sample ID: 240-22303-8

Matrix: Water Lab File ID: Z0032618.D

Analysis Method: RSK-175 Date Collected: 03/21/2013 13:40

Sample wt/vol: 17(mL) Date Analyzed: 03/26/2013 15:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79468 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.35	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	90		40-122

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74A-032113 Lab Sample ID: 240-22303-4

Matrix: Water Lab File ID: 02APR13-perc-069.d

Analysis Method: 6850 Date Collected: 03/21/2013 13:40

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 09:51

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22303-1

SDG No.:

Client Sample ID: MRC-MW74B-032113 | Lab Sample ID: 240-22303-5

Matrix: Water | Lab File ID: 02APR13-perc-072.d

Analysis Method: 6850 | Date Collected: 03/21/2013 14:50

Extraction Method: Filtration | Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/03/2013 10:40

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 80(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.28	J	0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW104B-032113 Lab Sample ID: 240-22303-7

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 11:49

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 10:35

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW93A-032113 Lab Sample ID: 240-22303-10

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 16:00

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW104B-032113 Lab Sample ID: 240-22303-7

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 11:49

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	11	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.65	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	59	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.3	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	13	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	79	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.21	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	2.8	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	72	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.39	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	240	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.1	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 10:35

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	11	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.39	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	160	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	30	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	150	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.26	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.79	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	110	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.32	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.36	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	310	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.72	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.83	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 10:35

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	13000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	290	200	81	ug/L			1	6010C
7440-09-7	Potassium	6400	5000	72	ug/L			1	6010C
7439-95-4	Magnesium	12000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	420	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	71000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	9100	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW37B-032113 Lab Sample ID: 240-22303-8

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 13:40

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	18000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	390	200	81	ug/L			1	6010C
7440-09-7	Potassium	3100	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	3900	5000	34	ug/L	J	B	1	6010C
7439-96-5	Manganese	37	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	12000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	10000	5400	70	ug/L			5	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW93A-032113 Lab Sample ID: 240-22303-10

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 16:00

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	35	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	2.3	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	180	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	4.7	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	39	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	1800	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	2.2	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	6.3	5.0	0.50	ug/L			1	6020
7440-48-4	Cobalt	1900	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	1300	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.3	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	3.2	20	0.80	ug/L	J		1	6020

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 10:35

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	3.5	5.0	2.7	mg/L	J		1	310.1
	Total Dissolved Solids	540	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	160	1.0	0.10	mg/L		B	1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U	^	1	300.0
14797-55-8	Nitrate as N	0.37	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	18	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U	^	1	300.0
7664-41-7	Ammonia (as N)	0.083	0.20	0.035	mg/L	J	B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW34B-032113 Lab Sample ID: 240-22303-2

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 10:35

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	1.6	1.0	0.24	mg/L			1	9060

Analyzed 4/6

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW37B-032113 Lab Sample ID: 240-22303-8

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 13:40

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	42	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	110	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	20	1.0	0.10	mg/L		B	1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U	^	1	300.0
14797-55-8	Nitrate as N	0.61	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	21	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U	^	1	300.0
7664-41-7	Ammonia (as N)	0.038	0.20	0.035	mg/L	J	B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW37B-032113 Lab Sample ID: 240-22303-8

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG ID.:

Matrix: Water Date Sampled: 03/21/2013 13:40

Reporting Basis: WET Date Received: 03/22/2013 09:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	3.8	1.0	0.24	mg/L			1	9060

Analyzed 4/6

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Tony Apanavage	3/21/13	114472
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
20251 Century Blvd Ste 200	(301) 528-5552		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Germantown / MD / 20874	Stu Cameron		
Project Name and Location (State)	**Carrier/Waybill Number**		
MRC GW Sampling MD			
Contract/Purchase Order/Quote No.			
112IC04795-02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	Total Metals	Perchlorate	Dissolved Gas	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Mg, Na	SiO2	DOC	Special Instructions/ Conditions of Receipt
TB-032113	—	—		X						2			X									
MRC-MW34B-032113	3/21/13	1035		X			1	3	2	5			X	X	[redacted]	X	X	X	X	X	X	-No Perchlorate Analysis
MRC-MW34C-032113		1205		X						3			X									
MRC-MW74A-032113		1340		X			1			3			X		X							
MRC-MW74B-032113		1450		X			1			3			X		X							
MRC-MW-104A-032113		1053		X						3			X									
MRC-MW-104B-032113		1149		X			1			3			X	X								
MRC-MW-37B-032113		1340		X			1	3	1	3			X		X	X	X	X	X	X		
MRC-MW-37C-032113		1541		X						3			X									
MRC-MW-93A-032113		1600		X					1	3			X	X								

240-22303 Chain of Custody

Page 1861 of 1865

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3-21-13	1620	1. Received By	3/21/13	1621
2. Relinquished By	3/21/13	1710	2. Received By	3/22/13	950
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling MD

Report Number: 240-22303-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury analysis were performed at the TestAmerica Irvine Laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 03/22/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.4 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-032113 (240-22303-1), MRC-MW34B-032113 (240-22303-2), MRC-MW34C-032113 (240-22303-3), MRC-MW74A-032113 (240-22303-4), MRC-MW74B-032113 (240-22303-5), MRC-MW104A-032113 (240-22303-6), MRC-MW104B-032113 (240-22303-7), MRC-MW37B-032113 (240-22303-8), MRC-MW37C-032113 (240-22303-9) and MRC-MW93A-032113 (240-22303-10) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/30/2013 and 04/01/2013.

Acetone and Hexachlorobutadiene were detected in method blank MB 240-79987/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Acetone and Methylene Chloride were detected in method blank MB 240-79987/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene, Acetone and Naphthalene were detected in method blank MB 240-80086/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

tert-Butyl alcohol failed the recovery criteria high for LCS 240-79987/4. 1,2,3-Trichlorobenzene and tert-Butyl alcohol failed the recovery criteria low for LCS 240-80086/4.

Samples MRC-MW74A-032113 (240-22303-4)[40X] and MRC-MW74B-032113 (240-22303-5)[1250X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 80086 exceeded control limits for the following analyte(s): 2-Methyl-2-propanol, 1,2,3-Trichlorobenzene. These have been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED GASES
Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 03/26/2013.

No difficulties were encountered during the dissolved gases analyses. All quality control parameters were within the acceptance limits.

PERCHLORATE
Samples MRC-MW74A-032113 (240-22303-4) and MRC-MW74B-032113 (240-22303-5) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/02/2013 and analyzed on 04/03/2013.

No difficulties were encountered during the perchlorate analyses. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/29/2013 and analyzed on 04/01/2013 and 04/04/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-79873/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

SiO2, Silica failed the recovery criteria low for the MS/MSD of sample MRC-MW37B-032113MS/MSD (240-22303-8) in batch 240-80661.

Sample MRC-MW37B-032113 (240-22303-8)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW34B-032113 (240-22303-2), MRC-MW104B-032113 (240-22303-7) and MRC-MW93A-032113 (240-22303-10) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/04/2013 and analyzed on 04/05/2013.

Molybdenum was detected in method blank MB 440-96231/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW34B-032113 (240-22303-2), MRC-MW104B-032113 (240-22303-7) and MRC-MW93A-032113 (240-22303-10) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/08/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/27/2013.

No difficulties were encountered during the TDS analyses. All quality control parameters were within the acceptance limits.

ANIONS
Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 03/22/2013.

The laboratory control sample (LCS) for batch 79204 exceeded control limits for the following analytes: nitrite and orthophosphate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No other difficulties were encountered during the anions analyses. All quality control parameters were within the acceptance limits.

ANIONS
Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 03/22/2013.

Chloride was detected in method blank MB 240-79203/3 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ALKALINITY

Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/01/2013.

No difficulties were encountered during the alkalinity analyses. All quality control parameters were within the acceptance limits.

AMMONIA

Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/01/2013.

Ammonia (as N) was detected in method blank MB 240-80119/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the ammonia analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Samples MRC-MW34B-032113 (240-22303-2) and MRC-MW37B-032113 (240-22303-8) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/06/2013.

No difficulties were encountered during the TOC analyses. All quality control parameters were within the acceptance limits.

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\NCChrom\ChromData\A3UX10\20130401-18427.b\UXX3034.D		
Lims ID:	240-22303-A-5	Client ID:	MRC-MW74B-032113
Inject. Date:	01-Apr-2013 20:33:30	Dil. Factor:	1250.0000
Sample Type:	Client		
Sample ID:	240-0018427-026		
Misc. Info.:			
Operator:	1904	Instrument ID:	A3UX10
Purge Vol:	5.000 mL	ALS Bottle#:	25
Lims Batch ID:	80086	Lims Sample ID:	26
Detector:	MS SCAN		
Method:	\\NCChrom\ChromData\A3UX10\20130401-18427.b\8260_10.m		
Last Update:	02-Apr-2013 09:18:59	Calib Date:	11-Feb-2013 13:39:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCChrom\ChromData\A3UX10\20130211-17255.b\UXX2347.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK035		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.208	5.198	0.010	100	1577473	10.0	
* 2 Chlorobenzene-d5	117	7.881	7.872	0.009	82	1219322	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.117	10.119	-0.002	93	658332	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.628	4.628	0.0	59	429232	9.94	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.912	4.912	0.0	0	423066	7.39	
$ 7 Toluene-d8 (Surr)	98	6.568	6.568	0.0	92	1302426	7.57	
$ 8 4-Bromofluorobenzene (Surr)	95	8.981	8.981	0.0	97	478825	8.61	
12 Dichlorodifluoromethane	85		1.564					
13 Chloromethane	50		1.694					
14 Vinyl chloride	62		1.789					
16 Bromomethane	94		2.085					9
17 Chloroethane	64		2.167					9
19 Trichlorofluoromethane	101		2.369					
23 1,1-Dichloroethene	96		2.806					9
24 Acetone	43	2.842	2.818	0.024	81	18428	1.55	
25 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.818					9
27 Carbon disulfide	76		3.007					
31 Methylene Chloride	84		3.197					
32 2-Methyl-2-propanol	59		3.256					
34 trans-1,2-Dichloroethene	96		3.421					
35 Methyl tert-butyl ether	73		3.421					
37 1,1-Dichloroethane	63		3.764					
38 Vinyl acetate	86		3.800					
39 Isopropyl ether	87		3.815					
41 Tert-butyl ethyl ether	59		4.122					
42 2-Butanone (MEK)	43		4.237					
43 cis-1,2-Dichloroethene	96	4.250	4.237	0.013	43	15659	0.3277	
44 2,2-Dichloropropane	77		4.249					
48 Chlorobromomethane	128		4.438					
50 Chloroform	83		4.498					9
51 1,1,1-Trichloroethane	97		4.675					
53 1,1-Dichloropropene	75		4.805					

Report Date: 02-Apr-2013 09:19:34 Chrom Revision: 2.0 01-Feb-2013 10:03:10
Data File: \\NCChrom\ChromData\A3UX10\20130401-18427.b\UXX3034.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
54 Carbon tetrachloride	117		4.817					
56 1,2-Dichloroethane	62		4.983					
57 Benzene	78		4.983					9
58 Tert-amyl methyl ether	73		5.057					
61 Trichloroethene	130	5.515	5.515	0.0	91	1490358	31.6	
64 1,2-Dichloropropane	63		5.704					
66 Dibromomethane	93		5.799					
68 Dichlorobromomethane	83		5.929					
70 2-Chloroethyl vinyl ether	63		6.165					
71 cis-1,3-Dichloropropene	75		6.307					
72 4-Methyl-2-pentanone (MIBK)	43		6.438					
73 Toluene	91		6.627					9
74 trans-1,3-Dichloropropene	75		6.792					
77 1,3-Dichloropropane	76		7.124					
78 Tetrachloroethene	164		7.124					
79 2-Hexanone	43		7.183					
81 Chlorodibromomethane	129		7.336					
83 Ethylene Dibromide	107		7.443					
85 Chlorobenzene	112		7.904					
86 1,1,1,2-Tetrachloroethane	131		7.975					
87 Ethylbenzene	106		7.999					
88 m-Xylene & p-Xylene	106		8.105					
90 Styrene	104		8.496					9
89 o-Xylene	106		8.496					
91 Bromoform	173		8.673					
92 Isopropylbenzene	105		8.839					
95 1,1,2,2-Tetrachloroethane	83		9.111					
96 Bromobenzene	156		9.146					
97 1,2,3-Trichloropropane	110		9.158					
99 N-Propylbenzene	120		9.241					
100 2-Chlorotoluene	126		9.324					
102 4-Chlorotoluene	126		9.430					
103 tert-Butylbenzene	119		9.738					
104 1,2,4-Trimethylbenzene	105		9.773					9
105 sec-Butylbenzene	105		9.951					
106 1,3-Dichlorobenzene	146		10.057					
107 4-Isopropyltoluene	119		10.093					
108 1,4-Dichlorobenzene	146		10.140					
109 1,2,3-Trimethylbenzene	105		10.190					
110 n-Butylbenzene	91		10.495					
111 1,2-Dichlorobenzene	146		10.518					
112 1,2-Dibromo-3-Chloropropane	157		11.287					
114 1,2,4-Trichlorobenzene	180		12.127					
115 Hexachlorobutadiene	225		12.304					
116 Naphthalene	128		12.364					9
117 1,2,3-Trichlorobenzene	180		12.624					
S 122 Xylenes, Total	106		16.530					7

MRC-MW74B-032113

$\frac{1490358 \text{ samp}}{1577473 \text{ int}} \times \frac{10 \text{ int}}{0.2986 \text{ ical}} \times 1250 \text{ DF} = 39550 \text{ ug/L}$

Reported as 40000 ug/L

MRC-MW34B-032113

Sample Name: 240-22303-I-2-A Acquired: 4/1/2013 12:49:51 Type: Unk
Method: Standard Method + IEC Checks(v120) Mode: CONC Corr. Factor: 1.000000
User: Roger Method: 6010B/6010C Method: 200.7 :
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.33767	603.78	.15291	54.221	139.51	10.286	13040.	.4020
Stddev	.33452	12.89	.68123	.221	.22	.035	54.	.1317
%RSD	99.067	2.1352	445.50	.40745	.15466	.33646	.41262	32.76
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	122.29	.30893	33.928	290.23	6402.9	6.3694	11509.	422.51
Stddev	.24	.38974	.213	2.41	32.2	.8272	16.	.73
%RSD	.19275	126.16	.62702	.83089	.50318	12.986	.13984	.17246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.73194	71102.	157.78	.25241	1.538	1.8666	.18569	3.1794
Stddev	.02428	198.	.19	1.4354	1.340	2.9656	.24278	.0547
%RSD	3.3176	.27800	.11732	568.68	87.08	158.88	130.74	1.7205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

71102 ug/L reported as 71000 ug/L

PDF created with pdfFactory trial version www.pdffactory.com

TestAmerica Canton Sample Receipt Form/Narrative Login # : 123103

Client TETRA TECH Site Name _____ By: _____ (Signature)

Cooler Received on 3-22-13 Opened on 3-22-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: Bubble Wrap Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF –2 °C)	Observed Sample Temp. 2.4 °C	Corrected Sample Temp. 0.4 °C	☐ Multiple on Back
IR GUN# 4G	(CF 0 °C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 5G	(CF 0 °C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 8	(CF 0 °C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
34B	<2 <2 <2	3-22-17	TJS
104B	<2	"	"
37B	<2 <2	"	"
93A	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22303-1

Login Number: 22303
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/23/13 10:21 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not on COC.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22303-1

Login Number: 22303
List Number: 1
Creator: Sadler, Jeremy

List Source: TestAmerica Sacramento
List Creation: 03/23/13 01:16 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-22303-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW93A-032113	240-22303-10	NM	3/21/2013	4/8/2013	4/8/2013	18	0	18
HG	UG/L	MRC-MW104B-032113	240-22303-7	NM	3/21/2013	4/8/2013	4/8/2013	18	0	18
HG	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	4/8/2013	4/8/2013	18	0	18
M	UG/L	MRC-MW93A-032113	240-22303-10	NM	3/21/2013	4/4/2013	4/5/2013	14	1	15
M	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/29/2013	4/4/2013	8	6	14
M	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/29/2013	4/1/2013	8	3	11
M	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	4/4/2013	4/5/2013	14	1	15
M	UG/L	MRC-MW104B-032113	240-22303-7	NM	3/21/2013	4/4/2013	4/5/2013	14	1	15
M	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/29/2013	4/1/2013	8	3	11
ALK	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
ALK	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
CL	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
CL	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
DOC	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	4/6/2013	4/6/2013	16	0	16
DOC	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	4/6/2013	4/6/2013	16	0	16

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NH3	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
NH3	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
NTA	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
NTA	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
NTI	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
NTI	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
OPO4	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
OPO4	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
PCL	UG/L	MRC-MW74B-032113	240-22303-5	NM	3/21/2013	4/2/2013	4/3/2013	12	1	13
PCL	UG/L	MRC-MW74A-032113	240-22303-4	NM	3/21/2013	4/2/2013	4/3/2013	12	1	13
PCS	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/27/2013	3/27/2013	6	0	6
PCS	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/27/2013	3/27/2013	6	0	6
SO4	MG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
SO4	MG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/22/2013	3/22/2013	1	0	1
OV	UG/L	MRC-MW74A-032113	240-22303-4	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
OV	UG/L	TB-032113	240-22303-1	NM	3/21/2013	3/30/2013	3/30/2013	9	0	9
OV	UG/L	MRC-MW74B-032113	240-22303-5	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
OV	UG/L	MRC-MW37C-032113	240-22303-9	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
OV	UG/L	MRC-MW34C-032113	240-22303-3	NM	3/21/2013	3/30/2013	3/30/2013	9	0	9
OV	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/30/2013	3/30/2013	9	0	9
OV	UG/L	MRC-MW104B-032113	240-22303-7	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
OV	UG/L	MRC-MW104A-032113	240-22303-6	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
OV	UG/L	MRC-MW93A-032113	240-22303-10	NM	3/21/2013	4/1/2013	4/1/2013	11	0	11
ETHA	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
ETHA	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
ETHE	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
ETHE	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
METH	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
METH	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
OVG	UG/L	MRC-MW34B-032113	240-22303-2	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5
OVG	UG/L	MRC-MW37B-032113	240-22303-8	NM	3/21/2013	3/26/2013	3/26/2013	5	0	5

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: UXC0287.D Lab Sample ID: MB 240-79987/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 03/30/2013 10:08

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-79987/4	UXC0286.D	03/30/2013 09:45

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79987/5

Matrix: Water | Lab File ID: UXC0287.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 10:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	2.82	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79987/5

Matrix: Water | Lab File ID: UXC0287.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 10:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	0.547	J	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79987/5

Matrix: Water | Lab File ID: UXC0287.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 10:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-79987/5

Matrix: Water Lab File ID: UXC0287.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/30/2013 10:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79987 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0286.D

Lab ID: LCS 240-79987/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	26.1	130	43-136	
Benzene	10.0	9.72	97	83-112	
Bromobenzene	10.0	9.71	97	76-115	
Bromochloromethane	10.0	8.75	88	77-120	
Bromodichloromethane	10.0	9.27	93	72-121	
Bromoform	10.0	8.23	82	40-131	
Bromomethane	10.0	8.61	86	11-185	
2-Butanone	20.0	21.1	105	60-126	
Carbon disulfide	10.0	8.50	85	62-142	
Carbon tetrachloride	10.0	10.6	106	66-128	
Chlorobenzene	10.0	10.0	100	85-110	
Chloroethane	10.0	9.36	94	25-153	
2-Chloroethyl vinyl ether	10.0	9.37 J	94	52-131	
Chloroform	10.0	9.09	91	79-117	
Chloromethane	10.0	9.13	91	44-126	
2-Chlorotoluene	10.0	10.3	103	76-116	
4-Chlorotoluene	10.0	10.8	108	77-115	
cis-1,2-Dichloroethene	10.0	9.42	94	80-113	
cis-1,3-Dichloropropene	10.0	8.79	88	61-115	
Dibromochloromethane	10.0	9.62	96	64-119	
1,2-Dibromo-3-Chloropropane	10.0	7.77	78	42-136	
1,2-Dibromoethane	10.0	10.1	101	79-113	
Dibromomethane	10.0	9.84	98	81-120	
1,2-Dichlorobenzene	10.0	9.92	99	81-110	
1,3-Dichlorobenzene	10.0	9.86	99	80-110	
1,4-Dichlorobenzene	10.0	9.56	96	82-110	
Dichlorodifluoromethane	10.0	7.26	73	19-129	
1,1-Dichloroethane	10.0	10.0	100	82-115	
1,2-Dichloroethane	10.0	9.72	97	71-127	
1,1-Dichloroethene	10.0	9.25	92	78-131	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichloropropane	10.0	10.6	106	79-116	
2,2-Dichloropropane	10.0	12.7	127	50-129	
1,1-Dichloropropene	10.0	9.29	93	83-114	
Diisopropyl ether	10.0	8.68	87	77-118	
Ethylbenzene	10.0	10.2	102	83-112	
Hexachlorobutadiene	10.0	8.86	89	36-134	
2-Hexanone	20.0	25.9	129	55-133	
Isopropylbenzene	10.0	10.6	106	75-114	
Methylene Chloride	10.0	10.4	104	66-131	
4-Methyl-2-pentanone	20.0	22.6	113	63-128	
Methyl tert-butyl ether	10.0	10.9	109	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0286.D

Lab ID: LCS 240-79987/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	21.5	108	83-113	
Naphthalene	10.0	8.58	86	32-141	
n-Butylbenzene	10.0	11.3	113	66-125	
n-Propylbenzene	10.0	10.4	104	74-121	
o-Xylene	10.0	10.3	103	83-113	
p-Isopropyltoluene	10.0	11.1	111	74-120	
sec-Butylbenzene	10.0	10.7	107	70-117	
Styrene	10.0	10.5	105	79-114	
tert-Butyl alcohol	200	263	132	70-130	*
tert-Butylbenzene	10.0	10.8	108	71-115	
1,1,1,2-Tetrachloroethane	10.0	11.1	111	72-116	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	68-118	
Tetrachloroethene	10.0	9.43	94	79-114	
Toluene	10.0	10.3	103	84-111	
trans-1,2-Dichloroethene	10.0	9.62	96	83-117	
trans-1,3-Dichloropropene	10.0	10.2	102	58-117	
1,2,3-Trichlorobenzene	10.0	8.62	86	54-126	
1,2,4-Trichlorobenzene	10.0	8.55	86	48-135	
1,1,1-Trichloroethane	10.0	10.5	105	74-118	
Trichloroethene	10.0	8.61	86	76-117	
Trichlorofluoromethane	10.0	7.23	72	49-157	
1,2,3-Trichloropropane	10.0	10.2	102	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.80	98	74-151	
1,2,3-Trimethylbenzene	10.0	11.0	110	70-130	
1,2,4-Trimethylbenzene	10.0	11.0	110	76-120	
Vinyl acetate	10.0	9.58	96	46-161	
Vinyl chloride	10.0	9.48	95	53-127	
Xylenes, Total	30.0	31.8	106	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: UXC0288.D Lab Sample ID: MB 240-79987/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 03/30/2013 10:30

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TB-032113	240-22303-1	UXC0306.D	03/30/2013 17:46
MRC-MW34B-032113	240-22303-2	UXC0307.D	03/30/2013 18:09
MRC-MW34C-032113	240-22303-3	UXC0308.D	03/30/2013 18:31
	240-22295-B-2 MS	UXC0309.D	03/30/2013 18:53
	240-22295-B-2 MSD	UXC0310.D	03/30/2013 19:16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79987/6

Matrix: Water | Lab File ID: UXC0288.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 10:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	3.07	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79987/6

Matrix: Water | Lab File ID: UXC0288.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 10:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	0.410	J	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79987/6

Matrix: Water | Lab File ID: UXC0288.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/30/2013 10:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79987 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
1868-53-7	Dibromofluoromethane (Surr)	86		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		63-129
2037-26-5	Toluene-d8 (Surr)	93		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-79987/6

Matrix: Water Lab File ID: UXC0288.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/30/2013 10:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79987 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Not our Sample Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0309.D

Lab ID: 240-22295-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	571	79 J	703	109	33-145	
Benzene	286	29 U	278	97	72-121	
Bromobenzene	286	29 U	265	93	71-116	
Bromochloromethane	286	29 U	252	88	73-121	
Bromodichloromethane	286	29 U	259	91	67-120	
Bromoform	286	29 U	219	77	32-128	
Bromomethane	286	29 U	257	90	10-186	
2-Butanone	571	140 U	567	99	54-129	
Carbon disulfide	286	29 U	240	84	57-147	
Carbon tetrachloride	286	29 U	291	102	59-129	
Chlorobenzene	286	29 U	280	98	80-110	
Chloroethane	286	29 U	285	100	21-165	
2-Chloroethyl vinyl ether	286	290 U	73.9 J	26	10-150	
Chloroform	286	29 U	253	89	76-118	
Chloromethane	286	29 U	284	99	33-132	
2-Chlorotoluene	286	29 U	286	100	69-117	
4-Chlorotoluene	286	29 U	295	103	71-116	
cis-1,2-Dichloroethene	286	870	1140	96	70-120	E
cis-1,3-Dichloropropene	286	29 U	226	79	51-110	
Dibromochloromethane	286	29 U	242	85	56-118	
1,2-Dibromo-3-Chloropropane	286	140 U	217	76	32-139	
1,2-Dibromoethane	286	29 U	280	98	74-113	
Dibromomethane	286	29 U	276	96	77-121	
1,2-Dichlorobenzene	286	29 U	277	97	75-111	
1,3-Dichlorobenzene	286	29 U	273	95	73-110	
1,4-Dichlorobenzene	286	29 U	266	93	75-110	
Dichlorodifluoromethane	286	29 U	183	64	17-128	
1,1-Dichloroethane	286	29 U	281	98	79-116	
1,2-Dichloroethane	286	29 U	274	96	68-129	
1,1-Dichloroethene	286	27 J	331	107	74-135	
1,2-Dichloropropane	286	29 U	286	100	78-115	
1,3-Dichloropropane	286	29 U	301	105	74-118	
2,2-Dichloropropane	286	29 U	320	112	38-127	
1,1-Dichloropropene	286	29 U	252	88	80-114	
Diisopropyl ether	286	140 U	251	88	73-118	
Ethylbenzene	286	29 U	278	97	75-116	
Hexachlorobutadiene	286	29 U	220	77	27-132	
2-Hexanone	571	140 U	683	119	47-139	
Isopropylbenzene	286	29 U	288	101	68-116	
Methylene Chloride	286	12 J	312	105	63-128	
4-Methyl-2-pentanone	571	140 U	603	105	56-131	
Methyl tert-butyl ether	286	29 U	290	102	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0309.D

Lab ID: 240-22295-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	571	57 U	600	105	75-117	
Naphthalene	286	29 U	208	73	15-158	
n-Butylbenzene	286	29 U	302	106	56-127	
n-Propylbenzene	286	29 U	289	101	64-124	
o-Xylene	286	29 U	288	101	76-116	
p-Isopropyltoluene	286	29 U	303	106	64-122	
sec-Butylbenzene	286	29 U	287	101	60-119	
Styrene	286	29 U	300	105	71-117	
tert-Butyl alcohol	5710	570 U	7180	126	70-130	
tert-Butylbenzene	286	29 U	285	100	61-119	
1,1,1,2-Tetrachloroethane	286	29 U	294	103	64-118	
1,1,2,2-Tetrachloroethane	286	29 U	288	101	63-122	
Tetrachloroethene	286	29 U	250	87	70-117	
Toluene	286	29 U	283	99	78-114	
trans-1,2-Dichloroethene	286	29 U	272	95	80-119	
trans-1,3-Dichloropropene	286	29 U	261	91	46-116	
1,2,3-Trichlorobenzene	286	29 U	219	76	45-129	
1,2,4-Trichlorobenzene	286	29 U	209	73	38-138	
1,1,1-Trichloroethane	286	29 U	287	100	68-121	
Trichloroethene	286	360	592	83	66-120	
Trichlorofluoromethane	286	29 U	200	70	46-157	
1,2,3-Trichloropropane	286	29 U	278	97	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	286	29 U	272	95	70-152	
1,2,3-Trimethylbenzene	286	140 U	305	107	70-130	
1,2,4-Trimethylbenzene	286	29 U	305	107	67-124	
Vinyl acetate	286	57 U	241	84	43-157	
Vinyl chloride	286	29 U	285	100	49-130	
Xylenes, Total	857	57 U	888	104	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0310.D

Lab ID: 240-22295-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	571	658	101	7	30	33-145	
Benzene	286	282	99	1	30	72-121	
Bromobenzene	286	287	100	8	30	71-116	
Bromochloromethane	286	254	89	0	30	73-121	
Bromodichloromethane	286	271	95	4	30	67-120	
Bromoform	286	241	84	10	30	32-128	
Bromomethane	286	205	72	22	30	10-186	
2-Butanone	571	621	109	9	30	54-129	
Carbon disulfide	286	206	72	15	30	57-147	
Carbon tetrachloride	286	273	96	6	30	59-129	
Chlorobenzene	286	291	102	4	30	80-110	
Chloroethane	286	222	78	25	30	21-165	
2-Chloroethyl vinyl ether	286	89.7 J	31	19	30	10-150	
Chloroform	286	262	92	4	30	76-118	
Chloromethane	286	237	83	18	30	33-132	
2-Chlorotoluene	286	306	107	7	30	69-117	
4-Chlorotoluene	286	314	110	6	30	71-116	
cis-1,2-Dichloroethene	286	1120	90	2	30	70-120	
cis-1,3-Dichloropropene	286	244	85	7	30	51-110	
Dibromochloromethane	286	280	98	15	30	56-118	
1,2-Dibromo-3-Chloropropane	286	246	86	13	30	32-139	
1,2-Dibromoethane	286	325	114	15	30	74-113	F
Dibromomethane	286	276	97	0	30	77-121	
1,2-Dichlorobenzene	286	282	99	2	30	75-111	
1,3-Dichlorobenzene	286	282	99	3	30	73-110	
1,4-Dichlorobenzene	286	277	97	4	30	75-110	
Dichlorodifluoromethane	286	156	55	16	30	17-128	
1,1-Dichloroethane	286	285	100	2	30	79-116	
1,2-Dichloroethane	286	284	100	4	30	68-129	
1,1-Dichloroethene	286	260	82	24	30	74-135	
1,2-Dichloropropane	286	289	101	1	30	78-115	
1,3-Dichloropropane	286	326	114	8	30	74-118	
2,2-Dichloropropane	286	29 U	0	NC	30	38-127	F
1,1-Dichloropropene	286	264	92	5	30	80-114	
Diisopropyl ether	286	248	87	1	30	73-118	
Ethylbenzene	286	290	101	4	30	75-116	
Hexachlorobutadiene	286	228	80	4	30	27-132	
2-Hexanone	571	712	125	4	30	47-139	
Isopropylbenzene	286	290	101	1	30	68-116	
Methylene Chloride	286	290	97	7	30	63-128	
4-Methyl-2-pentanone	571	620	108	3	30	56-131	
Methyl tert-butyl ether	286	283	99	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0310.D

Lab ID: 240-22295-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	571	617	108	3	30	75-117	
Naphthalene	286	239	84	14	30	15-158	
n-Butylbenzene	286	309	108	2	30	56-127	
n-Propylbenzene	286	300	105	4	30	64-124	
o-Xylene	286	301	105	4	30	76-116	
p-Isopropyltoluene	286	306	107	1	30	64-122	
sec-Butylbenzene	286	298	104	3	30	60-119	
Styrene	286	308	108	3	30	71-117	
tert-Butyl alcohol	5710	7030	123	2	30	70-130	
tert-Butylbenzene	286	297	104	4	30	61-119	
1,1,1,2-Tetrachloroethane	286	315	110	7	30	64-118	
1,1,2,2-Tetrachloroethane	286	323	113	11	30	63-122	
Tetrachloroethene	286	273	95	9	30	70-117	
Toluene	286	304	107	7	30	78-114	
trans-1,2-Dichloroethene	286	270	95	1	30	80-119	
trans-1,3-Dichloropropene	286	309	108	17	30	46-116	
1,2,3-Trichlorobenzene	286	250	87	13	30	45-129	
1,2,4-Trichlorobenzene	286	232	81	10	30	38-138	
1,1,1-Trichloroethane	286	276	97	4	30	68-121	
Trichloroethene	286	619	92	4	30	66-120	
Trichlorofluoromethane	286	160	56	22	30	46-157	
1,2,3-Trichloropropane	286	311	109	11	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	286	206	72	28	30	70-152	
1,2,3-Trimethylbenzene	286	312	109	2	30	70-130	
1,2,4-Trimethylbenzene	286	309	108	1	30	67-124	
Vinyl acetate	286	264	92	9	30	43-157	
Vinyl chloride	286	261	91	9	30	49-130	
Xylenes, Total	857	918	107	3	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: UXX3014.D Lab Sample ID: MB 240-80086/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 04/01/2013 13:20

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80086/4	UXX3012.D	04/01/2013 12:37
MRC-MW74A-032113	240-22303-4	UXX3020.D	04/01/2013 15:29
MRC-MW104A-032113	240-22303-6	UXX3025.D	04/01/2013 17:18
MRC-MW104B-032113	240-22303-7	UXX3026.D	04/01/2013 17:40
MRC-MW37B-032113	240-22303-8	UXX3027.D	04/01/2013 18:02
MRC-MW37C-032113	240-22303-9	UXX3028.D	04/01/2013 18:24
MRC-MW93A-032113	240-22303-10	UXX3029.D	04/01/2013 18:46
MRC-MW74B-032113	240-22303-5	UXX3034.D	04/01/2013 20:33
	240-22375-B-7 MS	UXX3039.D	04/01/2013 22:20
	240-22375-B-7 MSD	UXX3040.D	04/01/2013 22:41

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80086/6

Matrix: Water | Lab File ID: UXX3014.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.39	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80086/6

Matrix: Water | Lab File ID: UXX3014.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/01/2013 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80086 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	0.548	J	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	0.180	J	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80086/6

Matrix: Water Lab File ID: UXX3014.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 13:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	73		63-129
2037-26-5	Toluene-d8 (Surr)	80		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80086/6

Matrix: Water Lab File ID: UXX3014.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/01/2013 13:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80086 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX3012.D

Lab ID: LCS 240-80086/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	16.3	82	43-136	
Benzene	10.0	9.26	93	83-112	
Bromobenzene	10.0	10.9	109	76-115	
Bromochloromethane	10.0	10.2	102	77-120	
Bromodichloromethane	10.0	8.87	89	72-121	
Bromoform	10.0	10.6	106	40-131	
Bromomethane	10.0	6.20	62	11-185	
2-Butanone	20.0	14.0	70	60-126	
Carbon disulfide	10.0	10.1	101	62-142	
Carbon tetrachloride	10.0	9.19	92	66-128	
Chlorobenzene	10.0	10.1	101	85-110	
Chloroethane	10.0	7.70	77	25-153	
2-Chloroethyl vinyl ether	10.0	7.34 J	73	52-131	
Chloroform	10.0	9.12	91	79-117	
Chloromethane	10.0	7.98	80	44-126	
2-Chlorotoluene	10.0	10.6	106	76-116	
4-Chlorotoluene	10.0	10.8	108	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.18	82	61-115	
Dibromochloromethane	10.0	10.4	104	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.10	81	42-136	
1,2-Dibromoethane	10.0	9.73	97	79-113	
Dibromomethane	10.0	9.67	97	81-120	
1,2-Dichlorobenzene	10.0	10.3	103	81-110	
1,3-Dichlorobenzene	10.0	10.4	104	80-110	
1,4-Dichlorobenzene	10.0	10.0	100	82-110	
Dichlorodifluoromethane	10.0	6.68	67	19-129	
1,1-Dichloroethane	10.0	9.20	92	82-115	
1,2-Dichloroethane	10.0	7.74	77	71-127	
1,1-Dichloroethene	10.0	10.0	100	78-131	
1,2-Dichloropropane	10.0	8.77	88	81-115	
1,3-Dichloropropane	10.0	8.73	87	79-116	
2,2-Dichloropropane	10.0	9.06	91	50-129	
1,1-Dichloropropene	10.0	8.76	88	83-114	
Diisopropyl ether	10.0	9.47	95	77-118	
Ethylbenzene	10.0	9.80	98	83-112	
Hexachlorobutadiene	10.0	6.65	67	36-134	
2-Hexanone	20.0	16.7	83	55-133	
Isopropylbenzene	10.0	10.3	103	75-114	
Methylene Chloride	10.0	9.70	97	66-131	
4-Methyl-2-pentanone	20.0	15.7	79	63-128	
Methyl tert-butyl ether	10.0	7.90	79	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX3012.D

Lab ID: LCS 240-80086/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	21.0	105	83-113	
Naphthalene	10.0	4.73	47	32-141	
n-Butylbenzene	10.0	8.86	89	66-125	
n-Propylbenzene	10.0	10.6	106	74-121	
o-Xylene	10.0	10.4	104	83-113	
p-Isopropyltoluene	10.0	10.2	102	74-120	
sec-Butylbenzene	10.0	9.53	95	70-117	
Styrene	10.0	10.0	100	79-114	
tert-Butyl alcohol	200	130	65	70-130	*
tert-Butylbenzene	10.0	9.51	95	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.1	101	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.10	91	68-118	
Tetrachloroethene	10.0	9.94	99	79-114	
Toluene	10.0	9.17	92	84-111	
trans-1,2-Dichloroethene	10.0	9.98	100	83-117	
trans-1,3-Dichloropropene	10.0	8.56	86	58-117	
1,2,3-Trichlorobenzene	10.0	5.23	52	54-126	*
1,2,4-Trichlorobenzene	10.0	6.95	69	48-135	
1,1,1-Trichloroethane	10.0	9.33	93	74-118	
Trichloroethene	10.0	9.98	100	76-117	
Trichlorofluoromethane	10.0	5.73	57	49-157	
1,2,3-Trichloropropane	10.0	9.64	96	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	10.4	104	74-151	
1,2,3-Trimethylbenzene	10.0	9.48	95	70-130	
1,2,4-Trimethylbenzene	10.0	10.1	101	76-120	
Vinyl acetate	10.0	8.19	82	46-161	
Vinyl chloride	10.0	8.07	81	53-127	
Xylenes, Total	30.0	31.4	105	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Not our Sample

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX3039.D

Lab ID: 240-22375-B-7 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	3330	200 J	1470	38	33-145	
Benzene	1670	170 U	1540	92	72-121	
Bromobenzene	1670	170 U	1680	101	71-116	
Bromochloromethane	1670	170 U	1580	95	73-121	
Bromodichloromethane	1670	170 U	1420	85	67-120	
Bromoform	1670	170 U	1570	94	32-128	
Bromomethane	1670	170 U	1110	66	10-186	
2-Butanone	3330	830 U	1780	53	54-129	F
Carbon disulfide	1670	170 U	1580	95	57-147	
Carbon tetrachloride	1670	170 U	1390	83	59-129	
Chlorobenzene	1670	170 U	1650	99	80-110	
Chloroethane	1670	170 U	1290	78	21-165	
2-Chloroethyl vinyl ether	1670	1700 U	1030 J	62	10-150	
Chloroform	1670	170 U	1460	87	76-118	
Chloromethane	1670	170 U	1280	77	33-132	
2-Chlorotoluene	1670	170 U	1570	94	69-117	
4-Chlorotoluene	1670	170 U	1620	97	71-116	
cis-1,2-Dichloroethene	1670	2300	3890	97	70-120	
cis-1,3-Dichloropropene	1670	170 U	1250	75	51-110	
Dibromochloromethane	1670	170 U	1590	95	56-118	
1,2-Dibromo-3-Chloropropane	1670	830 U	1100	66	32-139	
1,2-Dibromoethane	1670	170 U	1600	96	74-113	
Dibromomethane	1670	170 U	1520	91	77-121	
1,2-Dichlorobenzene	1670	170 U	1620	97	75-111	
1,3-Dichlorobenzene	1670	170 U	1620	97	73-110	
1,4-Dichlorobenzene	1670	170 U	1590	96	75-110	
Dichlorodifluoromethane	1670	170 U	957	57	17-128	
1,1-Dichloroethane	1670	77 J	1540	88	79-116	
1,2-Dichloroethane	1670	170 U	1260	76	68-129	
1,1-Dichloroethene	1670	34 J	1720	101	74-135	
1,2-Dichloropropane	1670	170 U	1450	87	78-115	
1,3-Dichloropropane	1670	170 U	1490	89	74-118	
2,2-Dichloropropane	1670	170 U	1350	81	38-127	
1,1-Dichloropropene	1670	170 U	1390	84	80-114	
Diisopropyl ether	1670	830 U	1510	90	73-118	
Ethylbenzene	1670	170 U	1620	97	75-116	
Hexachlorobutadiene	1670	170 U	967	58	27-132	
2-Hexanone	3330	830 U	2340	70	47-139	
Isopropylbenzene	1670	170 U	1610	96	68-116	
Methylene Chloride	1670	73 J	1570	90	63-128	
4-Methyl-2-pentanone	3330	830 U	2170	65	56-131	
Methyl tert-butyl ether	1670	170 U	1180	71	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX3039.D

Lab ID: 240-22375-B-7 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	3330	330 U	3440	103	75-117	
Naphthalene	1670	170 U	638	38	15-158	
n-Butylbenzene	1670	170 U	1250	75	56-127	
n-Propylbenzene	1670	170 U	1590	95	64-124	
o-Xylene	1670	170 U	1700	102	76-116	
p-Isopropyltoluene	1670	170 U	1510	91	64-122	
sec-Butylbenzene	1670	170 U	1410	85	60-119	
Styrene	1670	170 U	1630	98	71-117	
tert-Butyl alcohol	33300	3300 U	12000	36	70-130	F
tert-Butylbenzene	1670	170 U	1380	83	61-119	
1,1,1,2-Tetrachloroethane	1670	170 U	1640	98	64-118	
1,1,2,2-Tetrachloroethane	1670	170 U	1340	81	63-122	
Tetrachloroethene	1670	170 U	1540	92	70-117	
Toluene	1670	170 U	1530	92	78-114	
trans-1,2-Dichloroethene	1670	170 U	1600	96	80-119	
trans-1,3-Dichloropropene	1670	170 U	1260	75	46-116	
1,2,3-Trichlorobenzene	1670	170 U	716	43	45-129	F
1,2,4-Trichlorobenzene	1670	170 U	929	56	38-138	
1,1,1-Trichloroethane	1670	170 U	1450	87	68-121	
Trichloroethene	1670	6600	7930	78	66-120	E
Trichlorofluoromethane	1670	170 U	1220	73	46-157	
1,2,3-Trichloropropane	1670	170 U	1450	87	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	1670	170 U	1870	112	70-152	
1,2,3-Trimethylbenzene	1670	830 U	1460	88	70-130	
1,2,4-Trimethylbenzene	1670	170 U	1560	94	67-124	
Vinyl acetate	1670	330 U	1250	75	43-157	
Vinyl chloride	1670	170 U	1320	79	49-130	
Xylenes, Total	5000	330 U	5140	103	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX3040.D

Lab ID: 240-22375-B-7 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	3330	1360	35	8	30	33-145	
Benzene	1670	1520	91	1	30	72-121	
Bromobenzene	1670	1660	100	1	30	71-116	
Bromochloromethane	1670	1620	97	3	30	73-121	
Bromodichloromethane	1670	1450	87	2	30	67-120	
Bromoform	1670	1510	91	4	30	32-128	
Bromomethane	1670	1190	71	7	30	10-186	
2-Butanone	3330	1710	51	4	30	54-129	F
Carbon disulfide	1670	1570	94	0	30	57-147	
Carbon tetrachloride	1670	1400	84	1	30	59-129	
Chlorobenzene	1670	1650	99	0	30	80-110	
Chloroethane	1670	1300	78	0	30	21-165	
2-Chloroethyl vinyl ether	1670	993 J	60	4	30	10-150	
Chloroform	1670	1450	87	0	30	76-118	
Chloromethane	1670	1280	77	0	30	33-132	
2-Chlorotoluene	1670	1560	94	1	30	69-117	
4-Chlorotoluene	1670	1600	96	1	30	71-116	
cis-1,2-Dichloroethene	1670	3760	90	3	30	70-120	
cis-1,3-Dichloropropene	1670	1220	73	2	30	51-110	
Dibromochloromethane	1670	1630	98	3	30	56-118	
1,2-Dibromo-3-Chloropropane	1670	1260	76	14	30	32-139	
1,2-Dibromoethane	1670	1580	95	2	30	74-113	
Dibromomethane	1670	1440	86	6	30	77-121	
1,2-Dichlorobenzene	1670	1600	96	1	30	75-111	
1,3-Dichlorobenzene	1670	1580	95	2	30	73-110	
1,4-Dichlorobenzene	1670	1560	94	2	30	75-110	
Dichlorodifluoromethane	1670	1030	62	7	30	17-128	
1,1-Dichloroethane	1670	1480	84	4	30	79-116	
1,2-Dichloroethane	1670	1270	76	0	30	68-129	
1,1-Dichloroethene	1670	1680	99	2	30	74-135	
1,2-Dichloropropane	1670	1460	88	1	30	78-115	
1,3-Dichloropropane	1670	1470	88	1	30	74-118	
2,2-Dichloropropane	1670	1310	79	2	30	38-127	
1,1-Dichloropropene	1670	1400	84	0	30	80-114	
Diisopropyl ether	1670	1490	89	1	30	73-118	
Ethylbenzene	1670	1600	96	1	30	75-116	
Hexachlorobutadiene	1670	1120	67	15	30	27-132	
2-Hexanone	3330	2320	70	1	30	47-139	
Isopropylbenzene	1670	1610	97	0	30	68-116	
Methylene Chloride	1670	1560	89	0	30	63-128	
4-Methyl-2-pentanone	3330	2060	62	5	30	56-131	
Methyl tert-butyl ether	1670	1150	69	3	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX3040.D

Lab ID: 240-22375-B-7 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	3330	3350	100	3	30	75-117	
Naphthalene	1670	866	52	30	30	15-158	
n-Butylbenzene	1670	1310	79	5	30	56-127	
n-Propylbenzene	1670	1600	96	1	30	64-124	
o-Xylene	1670	1740	105	2	30	76-116	
p-Isopropyltoluene	1670	1530	92	2	30	64-122	
sec-Butylbenzene	1670	1430	86	1	30	60-119	
Styrene	1670	1640	98	0	30	71-117	
tert-Butyl alcohol	33300	12400	37	3	30	70-130	F
tert-Butylbenzene	1670	1570	94	13	30	61-119	
1,1,1,2-Tetrachloroethane	1670	1580	95	4	30	64-118	
1,1,2,2-Tetrachloroethane	1670	1310	78	3	30	63-122	
Tetrachloroethene	1670	1580	95	3	30	70-117	
Toluene	1670	1530	92	0	30	78-114	
trans-1,2-Dichloroethene	1670	1570	94	2	30	80-119	
trans-1,3-Dichloropropene	1670	1320	79	5	30	46-116	
1,2,3-Trichlorobenzene	1670	999	60	33	30	45-129	F
1,2,4-Trichlorobenzene	1670	1160	70	23	30	38-138	
1,1,1-Trichloroethane	1670	1440	86	1	30	68-121	
Trichloroethene	1670	7630	60	4	30	66-120	E F
Trichlorofluoromethane	1670	1290	78	6	30	46-157	
1,2,3-Trichloropropane	1670	1360	82	7	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	1670	1990	119	6	30	70-152	
1,2,3-Trimethylbenzene	1670	1450	87	1	30	70-130	
1,2,4-Trimethylbenzene	1670	1540	92	2	30	67-124	
Vinyl acetate	1670	1170	70	7	30	43-157	
Vinyl chloride	1670	1350	81	3	30	49-130	
Xylenes, Total	5000	5090	102	1	30	76-116	

Column to be used to flag recovery and.RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-032113	240-22303-1	87	104	88	88
MRC-MW34B-032113	240-22303-2	89	104	93	93
MRC-MW34C-032113	240-22303-3	82	102	92	83
MRC-MW74A-032113	240-22303-4	95	73	85	80
MRC-MW74B-032113	240-22303-5	99	74	76	86
MRC-MW104A-032113	240-22303-6	94	73	82	81
MRC-MW104B-032113	240-22303-7	97	74	83	83
MRC-MW37B-032113	240-22303-8	98	74	83	80
MRC-MW37C-032113	240-22303-9	95	72	83	82
MRC-MW93A-032113	240-22303-10	102	73	76	82
	MB 240-79987/5	87	95	92	88
	MB 240-79987/6	86	95	93	90
	MB 240-80086/6	93	73	80	82
	LCS 240-79987/4	87	90	101	105
	LCS 240-80086/4	92	71	85	101
	240-22295-B-2 MS	87	91	99	105
	240-22375-B-7 MS	87	68	89	101
	240-22295-B-2 MSD	87	92	108	110
	240-22375-B-7 MSD	88	62 X	92	101

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: BFB5128.D BFB Injection Date: 02/11/2013

Instrument ID: A3UX10 BFB Injection Time: 09:15

Analysis Batch No.: 74846

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.8	
75	30.0 - 60.0 % of mass 95	55.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.2	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	99.1	
175	5.0 - 9.0 % of mass 174	6.7	(6.8)1
176	95.0 - 101.0 % of mass 174	96.1	(97.0)1
177	5.0 - 9.0 % of mass 176	6.9	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-74846/2	UXX2336.D	02/11/2013	09:40
	STD8260 240-74846/3	UXX2337.D	02/11/2013	10:02
	STD8260 240-74846/4	UXX2338.D	02/11/2013	10:24
	STD8260 240-74846/5	UXX2339.D	02/11/2013	10:45
	STD8260 240-74846/6	UXX2340.D	02/11/2013	11:07
	STD8260 240-74846/7	UXX2341.D	02/11/2013	11:29
	STDA9 240-74846/8	UXX2342.D	02/11/2013	11:50
	STDA9 240-74846/9	UXX2343.D	02/11/2013	12:12
	STDA9 240-74846/10	UXX2344.D	02/11/2013	12:34
	STDA9 240-74846/11	UXX2345.D	02/11/2013	12:56
	STDA9 240-74846/12	UXX2346.D	02/11/2013	13:17
	STDA9 240-74846/13	UXX2347.D	02/11/2013	13:39
	ICV 240-74846/14	UXX2348.D	02/11/2013	14:00

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 09:40 Calibration End Date: 02/11/2013 11:29 Calibration ID: 13632

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74846/7	UXX2341.D
Level 2	STD8260 240-74846/6	UXX2340.D
Level 3	STD8260 240-74846/5	UXX2339.D
Level 4	STD8260 240-74846/4	UXX2338.D
Level 5	STD8260 240-74846/3	UXX2337.D
Level 6	STD8260 240-74846/2	UXX2336.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2929 0.2327	0.2767	0.2617	0.2522	0.2430	Ave		0.2599				8.5		15.0			
Chloromethane	0.4339 0.3295	0.4093	0.3852	0.3510	0.3425	Ave		0.3752			0.1000	11.0		15.0			
Vinyl chloride	0.4289 0.3383	0.3916	0.3792	0.3783	0.3529	Ave		0.3782				8.3		15.0			
Bromomethane	0.2542 0.1955	0.2169	0.2143	0.2128	0.1935	Ave		0.2146				10.0		15.0			
Chloroethane	0.2936 0.2287	0.2460	0.2373	0.2382	0.2334	Ave		0.2462				9.7		15.0			
Trichlorofluoromethane	0.4710 0.4215	0.4348	0.4305	0.4285	0.4307	Ave		0.4362				4.0		15.0			
Acrolein	0.0384 0.0393	0.0377	0.0402	0.0428	0.0366	Ave		0.0392				5.5		15.0			
1,1-Dichloroethene	0.3097 0.3011	0.2873	0.2736	0.2876	0.2842	Ave		0.2906				4.4		15.0			
Acetone	0.0937 0.0661	0.0745	0.0721	0.0786	0.0685	Ave		0.0756				13.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2514 0.2198	0.2250	0.2225	0.2237	0.2104	Ave		0.2255				6.1		15.0			
Iodomethane	0.4574 0.4271	0.4175	0.4384	0.4207	0.4414	Ave		0.4338				3.4		15.0			
Carbon disulfide	0.7790 0.8637	0.7216	0.7486	0.7828	0.8449	Ave		0.7901				6.9		15.0			
Acetonitrile	0.0196 0.0156	0.0198	0.0200	0.0229	0.0179	Ave		0.0193				12.0		15.0			
Methyl acetate	0.1668 0.1766	0.1862	0.1722	0.1798	0.1775	Ave		0.1765				3.8		15.0			
Methylene Chloride	0.5205 0.3016	0.4031	0.3267	0.3013	0.3044	Linl	0.2135	0.2929							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 09:40 Calibration End Date: 02/11/2013 11:29 Calibration ID: 13632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0150 0.0119	0.0126	0.0148	0.0154	0.0132	Ave		0.0138				11.0		15.0			
Acrylonitrile	0.0789 0.0888	0.0877	0.0853	0.0926	0.0885	Ave		0.0870				5.3		15.0			
Methyl tert-butyl ether	0.7766 0.8361	0.7328	0.7547	0.7811	0.8301	Ave		0.7852				5.2		15.0			
trans-1,2-Dichloroethene	0.2873 0.3116	0.2865	0.2867	0.2974	0.3095	Ave		0.2965				3.9		15.0			
Hexane	0.0596 0.0638	0.0543	0.0570	0.0590	0.0621	Ave		0.0593				5.8		15.0			
1,1-Dichloroethane	0.4701 0.5093	0.4563	0.4781	0.4824	0.5037	Ave		0.4833			0.1000	4.2		15.0			
Vinyl acetate	0.0323 0.0508	0.0353	0.0382	0.0435	0.0473	Lin1	-0.021	0.0496							0.9960		0.9900
2-Butanone	0.0976 0.0916	0.0954	0.0877	0.0938	0.0914	Ave		0.0929				3.7		15.0			
cis-1,2-Dichloroethene	0.3021 0.3187	0.2894	0.2830	0.3068	0.3176	Ave		0.3029				4.8		15.0			
2,2-Dichloropropane	0.2976 0.3127	0.2863	0.2959	0.3074	0.3308	Ave		0.3051				5.1		15.0			
Bromochloromethane	0.1647 0.1504	0.1454	0.1468	0.1486	0.1504	Ave		0.1510				4.6		15.0			
Tetrahydrofuran	0.0734 0.0570	0.0616	0.0586	0.0630	0.0584	Ave		0.0620				9.7		15.0			
Chloroform	0.5056 0.5208	0.5125	0.4894	0.4926	0.5181	Ave		0.5065				2.6		15.0			
1,1,1-Trichloroethane	0.3930 0.4289	0.4136	0.3941	0.4216	0.4260	Ave		0.4129				3.8		15.0			
Cyclohexane	0.3747 0.4381	0.3786	0.3713	0.4274	0.4273	Ave		0.4029				7.7		15.0			
1,1-Dichloropropene	0.3428 0.3987	0.3368	0.3564	0.3810	0.4014	Ave		0.3695				7.6		15.0			
Carbon tetrachloride	0.3620 0.4003	0.3607	0.3518	0.3743	0.3943	Ave		0.3739				5.2		15.0			
1,2-Dichloroethane	0.3956 0.3976	0.4001	0.3862	0.3991	0.3949	Ave		0.3956				1.3		15.0			
Benzene	1.0839 1.1916	1.0745	1.0990	1.1315	1.1622	Ave		1.1238				4.1		15.0			
Trichloroethene	0.3133 0.3015	0.2945	0.2869	0.2979	0.2975	Ave		0.2986				2.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 09:40 Calibration End Date: 02/11/2013 11:29 Calibration ID: 13632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3565 0.4270	0.3666	0.3591	0.4060	0.4066	Ave		0.3870				7.7		15.0			
1,2-Dichloropropane	0.2334 0.2616	0.2483	0.2447	0.2525	0.2595	Ave		0.2500				4.2		15.0			
Dibromomethane	0.1546 0.1604	0.1466	0.1629	0.1621	0.1611	Ave		0.1580				4.0		15.0			
1,4-Dioxane	0.0010 0.0012	0.0010	0.0011	0.0016	0.0014	Qua	-0.066	0.0018	X 0						0.9970		0.9900
Bromodichloromethane	0.3154 0.3681	0.3079	0.3293	0.3445	0.3597	Ave		0.3375				7.2		15.0			
2-Chloroethyl vinyl ether	0.0945 0.1420	0.1069	0.1165	0.1316	0.1410	Lin1	-0.129	0.1422							0.9990		0.9900
cis-1,3-Dichloropropene	0.3147 0.4248	0.3072	0.3587	0.3859	0.4221	Ave		0.3689				14.0		15.0			
4-Methyl-2-pentanone	0.1494 0.1921	0.1626	0.1724	0.1935	0.1958	Ave		0.1776				11.0		15.0			
Toluene	1.4379 1.8231	1.5195	1.5805	1.5992	1.7212	Ave		1.6136				8.6		15.0			
trans-1,3-Dichloropropene	0.3838 0.5283	0.3631	0.4225	0.4417	0.4797	Ave		0.4365				14.0		15.0			
Ethyl methacrylate	0.2361 0.4310	0.2493	0.3138	0.3485	0.3952	Lin1	-0.287	0.4187							0.9940		0.9900
1,1,2-Trichloroethane	0.3067 0.3104	0.2766	0.2957	0.2941	0.3064	Ave		0.2983				4.2		15.0			
Tetrachloroethene	0.3931 0.3484	0.3412	0.3229	0.3281	0.3369	Ave		0.3451				7.3		15.0			
1,3-Dichloropropane	0.5029 0.5664	0.4895	0.5134	0.5224	0.5555	Ave		0.5250				5.7		15.0			
2-Hexanone	0.1321 0.1710	0.1367	0.1537	0.1604	0.1703	Ave		0.1541				11.0		15.0			
Dibromochloromethane	0.2556 0.3688	0.2603	0.2969	0.3121	0.3422	Ave		0.3060				15.0		15.0			
1,2-Dibromoethane	0.2721 0.3065	0.2690	0.2829	0.2897	0.3037	Ave		0.2873				5.5		15.0			
Chlorobenzene	1.0241 1.0507	0.9831	0.9847	0.9949	1.0391	Ave		1.0128			0.3000	2.9		15.0			
1,1,1,2-Tetrachloroethane	0.3600 0.3770	0.3253	0.3543	0.3556	0.3817	Ave		0.3590				5.6		15.0			
Ethylbenzene	0.4693 0.5747	0.5175	0.5211	0.5317	0.5724	Ave		0.5311				7.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 09:40 Calibration End Date: 02/11/2013 11:29 Calibration ID: 13632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.5789 0.7533	0.5803	0.6506	0.6727	0.7241	Ave		0.6600				11.0		15.0			
o-Xylene	0.5588 0.6939	0.5436	0.6257	0.6460	0.6901	Ave		0.6264				10.0		15.0			
Styrene	0.8005 1.1907	0.8251	0.9451	1.0131	1.1174	Lin1	-0.582	1.1637							0.9970		0.9900
Bromoform	0.1469 0.2158	0.1474	0.1742	0.1798	0.1988	Lin1	-0.103	0.2095			0.1000				0.9960		0.9900
Isopropylbenzene	1.2224 1.7029	1.3156	1.4719	1.5411	1.6869	Ave		1.4901				13.0		15.0			
1,1,2,2-Tetrachloroethane	0.6360 0.6224	0.5980	0.6417	0.6304	0.6516	Ave		0.6300			0.3000	2.9		15.0			
Bromobenzene	0.7150 0.7928	0.7097	0.7630	0.7590	0.7981	Ave		0.7563				5.0		15.0			
1,2,3-Trichloropropane	0.2192 0.2174	0.2103	0.2175	0.2218	0.2233	Ave		0.2183				2.1		15.0			
trans-1,4-Dichloro-2-butene	0.1148 0.1820	0.1151	0.1517	0.1486	0.1601	Lin1	-0.094	0.1748							0.9940		0.9900
n-Propylbenzene	0.6514 0.7810	0.6215	0.7394	0.7576	0.7738	Ave		0.7208				9.4		15.0			
2-Chlorotoluene	0.5761 0.6817	0.6264	0.6964	0.6824	0.6917	Ave		0.6591				7.3		15.0			
1,3,5-Trimethylbenzene	1.7093 2.2858	1.7978	2.1316	2.1784	2.3112	Ave		2.0690				12.0		15.0			
4-Chlorotoluene	0.6337 0.7709	0.6830	0.7473	0.7679	0.7637	Ave		0.7277				7.8		15.0			
tert-Butylbenzene	1.5023 1.7819	1.5139	1.9470	1.7600	2.0502	Ave		1.7592				13.0		15.0			
1,2,4-Trimethylbenzene	1.7182 2.2843	1.8168	2.1896	2.2523	2.3102	Ave		2.0952				12.0		15.0			
sec-Butylbenzene	1.9939 2.4297	2.0171	2.2948	2.3810	2.4191	Ave		2.2559				8.9		15.0			
1,3-Dichlorobenzene	1.3189 1.3792	1.2721	1.3281	1.3685	1.3740	Ave		1.3401				3.1		15.0			
p-Isopropyltoluene	1.6161 2.0417	1.6877	1.9336	1.9926	2.0772	Ave		1.8915				10.0		15.0			
1,4-Dichlorobenzene	1.5458 1.4700	1.4110	1.4056	1.4198	1.4616	Ave		1.4523				3.7		15.0			
n-Butylbenzene	1.3085 1.6780	1.2924	1.5110	1.5973	1.6885	Ave		1.5126				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 09:40 Calibration End Date: 02/11/2013 11:29 Calibration ID: 13632

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.2864 1.2423	1.2079	1.2535	1.2517	1.3029	Ave		1.2575				2.7		15.0			
1,2-Dibromo-3-Chloropropane	0.0853 0.0773	0.0904	0.0740	0.0878	0.0911	Ave		0.0843				8.4		15.0			
1,3,5-Trichlorobenzene	0.7669 0.6271	0.7165	0.7344	0.7412	0.7369	Ave		0.7205				6.7		15.0			
1,2,4-Trichlorobenzene	0.6009 0.5012	0.5649	0.6143	0.6088	0.6076	Ave		0.5829				7.5		15.0			
Hexachlorobutadiene	0.3380	0.3238	0.3083	0.2931	0.2645	Ave		0.3055				9.3		15.0			
Naphthalene	1.0118	0.9996	1.2162	1.3715	1.4148	Lin1	-0.596	1.4232							0.9980		0.9900
1,2,3-Trichlorobenzene	0.5500	0.5547	0.5306	0.5385	0.5110	Ave		0.5369				3.2		15.0			
Dibromofluoromethane (Surr)	0.2612 0.2857	0.2787	0.2643	0.2731	0.2790	Ave		0.2736				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3945 0.3557	0.3685	0.3583	0.3504	0.3502	Ave		0.3629				4.6		15.0			
Toluene-d8 (Surr)	1.3111 1.5519	1.3588	1.3826	1.3837	1.4811	Ave		1.4115				6.3		15.0			
4-Bromofluorobenzene (Surr)	0.4479 0.4751	0.4285	0.4488	0.4600	0.4767	Ave		0.4562				4.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-22303-1 | Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 11:50 | Calibration End Date: 02/11/2013 13:39 | Calibration ID: 13634

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-74846/13	UXX2347.D
Level 2	STDA9 240-74846/12	UXX2346.D
Level 3	STDA9 240-74846/11	UXX2345.D
Level 4	STDA9 240-74846/10	UXX2344.D
Level 5	STDA9 240-74846/9	UXX2343.D
Level 6	STDA9 240-74846/8	UXX2342.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.7083 0.6228	0.7383	0.5436	0.6609	0.5472	Ave		0.6369				13.0		15.0			
Ethyl ether	0.3812 0.3005	0.3122	0.3041	0.3079	0.2745	Ave		0.3134				11.0		15.0			
3-Chloro-1-propene	0.1357 0.1425	0.1310	0.1339	0.1327	0.1357	Ave		0.1352				2.9		15.0			
Diisopropyl ether	0.2412 0.2749	0.2318	0.2434	0.2535	0.2560	Ave		0.2502				6.0		15.0			
2-Chloro-1,3-butadiene	0.4027 0.4464	0.3813	0.4044	0.4146	0.4257	Ave		0.4125				5.4		15.0			
Ethyl-t-butyl ether (ETBE)	0.7437 0.7810	0.6657	0.6990	0.7147	0.7443	Ave		0.7247				5.6		15.0			
Propionitrile	0.0357 0.0281	0.0240	0.0247	0.0271	0.0270	Ave		0.0278	X			15.0		15.0			
Ethyl acetate	0.1569 0.1886	0.1723	0.1595	0.1686	0.1728	Ave		0.1698				6.7		15.0			
Methacrylonitrile	0.1301 0.1294	0.1157	0.1258	0.1191	0.1231	Ave		0.1239				4.6		15.0			
Isobutyl alcohol	0.0063 0.0080	0.0074	0.0071	0.0086	0.0081	Ave		0.0076	X			11.0		15.0			
Tert-amyl-methyl ether (TAME)	0.6103 0.7220	0.5912	0.6017	0.6483	0.6724	Ave		0.6410				7.8		15.0			
n-Heptane	0.0534 0.0529	0.0433	0.0480	0.0506	0.0505	Ave		0.0498	X			7.5		15.0			
n-Butanol	0.0062 0.0060	0.0054	0.0056	0.0061	0.0059	Ave		0.0059	X			5.4		15.0			
Methyl methacrylate	0.1339 0.1675	0.1272	0.1379	0.1542	0.1558	Ave		0.1461				11.0		15.0			
2-Nitropropane	0.0391 0.0501	0.0373	0.0372	0.0392	0.0423	Ave		0.0409	X			12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 74846

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/11/2013 11:50 Calibration End Date: 02/11/2013 13:39 Calibration ID: 13634

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0411 0.0530	0.0456	0.0476	0.0526	0.0559	Ave		0.0493				11.0		15.0			
1,2,3-Trimethylbenzene	1.7993 2.5952	1.8847	2.1483	2.2935	2.4861	Ave		2.2012				15.0		15.0			
2-Methylnaphthalene	0.4122	0.4244	0.3955	0.5146	0.4824	Ave		0.4458				11.0		15.0			
n-Butyl acetate	0.0909	0.0873	0.0988	0.1277	0.1522	Lin	-0.359	0.1573							0.9920		0.9900

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: BFB5165.D BFB Injection Date: 04/01/2013

Instrument ID: A3UX10 BFB Injection Time: 11:30

Analysis Batch No.: 80086

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.6	
75	30.0 - 60.0 % of mass 95	46.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.5)1
174	50.0 - 120.00 % of mass 95	98.3	
175	5.0 - 9.0 % of mass 174	7.1	(7.2)1
176	95.0 - 101.0 % of mass 174	94.2	(95.9)1
177	5.0 - 9.0 % of mass 176	6.6	(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-80086/2	UXX3010.D	04/01/2013	11:53
	CCV 240-80086/3	UXX3011.D	04/01/2013	12:15
	LCS 240-80086/4	UXX3012.D	04/01/2013	12:37
	MB 240-80086/6	UXX3014.D	04/01/2013	13:20
MRC-MW74A-032113	240-22303-4	UXX3020.D	04/01/2013	15:29
MRC-MW104A-032113	240-22303-6	UXX3025.D	04/01/2013	17:18
MRC-MW104B-032113	240-22303-7	UXX3026.D	04/01/2013	17:40
MRC-MW37B-032113	240-22303-8	UXX3027.D	04/01/2013	18:02
MRC-MW37C-032113	240-22303-9	UXX3028.D	04/01/2013	18:24
MRC-MW93A-032113	240-22303-10	UXX3029.D	04/01/2013	18:46
MRC-MW74B-032113	240-22303-5	UXX3034.D	04/01/2013	20:33
	240-22375-B-7 MS	UXX3039.D	04/01/2013	22:20
	240-22375-B-7 MSD	UXX3040.D	04/01/2013	22:41

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVIS 240-80086/2 Calibration Date: 04/01/2013 11:53

Instrument ID: A3UX10 Calib Start Date: 02/11/2013 09:40

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/11/2013 11:29

Lab File ID: UXX3010.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2599	0.3040		1.00	0.0100	17.0	50.0
Chloromethane	Ave	0.3752	0.3318	0.1000	1.00	0.0100	-11.6	50.0
Vinyl chloride	Ave	0.3782	0.3368		1.00	0.0100	-11.0	20.0
Bromomethane	Ave	0.2146	0.1725		1.00	0.0100	-19.6	50.0
Chloroethane	Ave	0.2462	0.2120		1.00	0.0100	-13.9	50.0
Trichlorofluoromethane	Ave	0.4362	0.2919		1.00	0.0100	-33.1	50.0
Acrolein	Ave	0.0392	0.0300 X		20.0	0.100	-23.4 X	50.0
1,1-Dichloroethene	Ave	0.2906	0.3307		1.00	0.0100	13.8	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2255	0.2677		1.00	0.0100	18.7	50.0
Acetone	Ave	0.0756	0.0612		10.0	0.0200	-19.1	50.0
Iodomethane	Ave	0.4338	0.5444		1.00	0.0100	25.5 X	50.0
Carbon disulfide	Ave	0.7901	0.9124		1.00	0.0100	15.5	50.0
Acetonitrile	Ave	0.0193	0.0144 X		20.0	0.100	-25.2 X	50.0
Methyl acetate	Ave	0.1765	0.1450		10.0	0.0200	-17.9	50.0
Methylene Chloride	Lin1		0.3178		1.00	0.0100	1.2	50.0
tert-Butyl alcohol	Ave	0.0138	0.0091		50.0	0.200	-34.5	50.0
Acrylonitrile	Ave	0.0870	0.0713		20.0	0.0200	-18.0	50.0
Methyl tert-butyl ether	Ave	0.7852	0.6821		1.00	0.0100	-13.1	50.0
trans-1,2-Dichloroethene	Ave	0.2965	0.3218		1.00	0.0100	8.5	50.0
Hexane	Ave	0.0593	0.0599		1.00	0.0100	1.0	20.0
1,1-Dichloroethane	Ave	0.4833	0.4783	0.1000	1.00	0.0100	-1.0	50.0
Vinyl acetate	Lin1		0.0380		2.00	0.0100	-18.0	50.0
2-Butanone	Ave	0.0929	0.0669		10.0	0.0200	-28.0	50.0
cis-1,2-Dichloroethene	Ave	0.3029	0.3299		1.00	0.0100	8.9	50.0
2,2-Dichloropropane	Ave	0.3051	0.2978		1.00	0.0100	-2.4	50.0
Bromochloromethane	Ave	0.1510	0.1693		1.00	0.0100	12.1	50.0
Tetrahydrofuran	Ave	0.0620	0.0492 X		5.00	0.0100	-20.6 X	50.0
Chloroform	Ave	0.5065	0.4965		1.00	0.0100	-2.0	20.0
1,1,1-Trichloroethane	Ave	0.4129	0.4145		1.00	0.0100	0.4	50.0
Cyclohexane	Ave	0.4029	0.4128		1.00	0.0100	2.5	50.0
1,1-Dichloropropene	Ave	0.3695	0.3560		1.00	0.0100	-3.7	50.0
Carbon tetrachloride	Ave	0.3739	0.3752		1.00	0.0100	0.3	50.0
1,2-Dichloroethane	Ave	0.3956	0.3243		1.00	0.0100	-18.0	50.0
Benzene	Ave	1.124	1.119		1.00	0.0100	-0.4	50.0
Trichloroethene	Ave	0.2986	0.3147		1.00	0.0100	5.4	50.0
Methylcyclohexane	Ave	0.3870	0.4015		1.00	0.0100	3.7	50.0
1,2-Dichloropropane	Ave	0.2500	0.2266		1.00	0.0100	-9.4	20.0
Dibromomethane	Ave	0.1580	0.1504		1.00	0.0100	-4.8	50.0
1,4-Dioxane	Qua		0.0013 X		50.0	0.500	-13.7	50.0
Bromodichloromethane	Ave	0.3375	0.3117		1.00	0.0100	-7.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVIS 240-80086/2 Calibration Date: 04/01/2013 11:53

Instrument ID: A3UX10 Calib Start Date: 02/11/2013 09:40

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/11/2013 11:29

Lab File ID: UXX3010.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.0987		10.0	0.0200	-26.0	50.0
cis-1,3-Dichloropropene	Ave	0.3689	0.3339		1.00	0.0100	-9.5	50.0
4-Methyl-2-pentanone	Ave	0.1776	0.1311		10.0	0.0200	-26.2	50.0
Toluene	Ave	1.614	1.565		1.00	0.0100	-3.0	20.0
trans-1,3-Dichloropropene	Ave	0.4365	0.3852		1.00	0.0100	-11.8	50.0
Ethyl methacrylate	Lin1		0.3116		1.00	0.0100	-18.7	50.0
1,1,2-Trichloroethane	Ave	0.2983	0.2829		1.00	0.0100	-5.2	50.0
1,3-Dichloropropane	Ave	0.5250	0.4762		1.00	0.0100	-9.3	50.0
Tetrachloroethene	Ave	0.3451	0.3639		1.00	0.0100	5.5	50.0
2-Hexanone	Ave	0.1541	0.1175		10.0	0.0200	-23.7	50.0
Dibromochloromethane	Ave	0.3060	0.3423		1.00	0.0100	11.9	50.0
1,2-Dibromoethane	Ave	0.2873	0.2943		1.00	0.0100	2.4	50.0
Chlorobenzene	Ave	1.013	1.095	0.3000	1.00	0.0100	8.2	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3590	0.3856		1.00	0.0100	7.4	50.0
Ethylbenzene	Ave	0.5311	0.5643		1.00	0.0100	6.2	20.0
m-Xylene & p-Xylene	Ave	0.6600	0.7377		2.00	0.0200	11.8	50.0
o-Xylene	Ave	0.6264	0.6867		1.00	0.0100	9.6	50.0
Styrene	Lin1		1.140		1.00	0.0100	3.0	50.0
Bromoform	Lin1		0.2236	0.1000	1.00	0.0100	11.7	50.0
Isopropylbenzene	Ave	1.490	1.659		1.00	0.0100	11.3	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6300	0.5685	0.3000	1.00	0.0100	-9.8	50.0
Bromobenzene	Ave	0.7563	0.8464		1.00	0.0100	11.9	50.0
1,2,3-Trichloropropane	Ave	0.2183	0.2088		1.00	0.0100	-4.3	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1327		1.00	0.0100	-18.7	50.0
n-Propylbenzene	Ave	0.7208	0.7766		1.00	0.0100	7.7	50.0
2-Chlorotoluene	Ave	0.6591	0.7046		1.00	0.0100	6.9	50.0
1,3,5-Trimethylbenzene	Ave	2.069	2.151		1.00	0.0100	4.0	50.0
4-Chlorotoluene	Ave	0.7277	0.7710		1.00	0.0100	5.9	50.0
tert-Butylbenzene	Ave	1.759	1.740		1.00	0.0100	-1.1	50.0
1,2,4-Trimethylbenzene	Ave	2.095	2.170		1.00	0.0100	3.6	50.0
sec-Butylbenzene	Ave	2.256	2.331		1.00	0.0100	3.3	50.0
1,3-Dichlorobenzene	Ave	1.340	1.431		1.00	0.0100	6.8	50.0
p-Isopropyltoluene	Ave	1.891	2.022		1.00	0.0100	6.9	50.0
1,4-Dichlorobenzene	Ave	1.452	1.513		1.00	0.0100	4.2	50.0
n-Butylbenzene	Ave	1.513	1.411		1.00	0.0100	-6.7	50.0
1,2-Dichlorobenzene	Ave	1.257	1.335		1.00	0.0100	6.1	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0843	0.0703		2.00	0.0100	-16.6	50.0
1,3,5-Trichlorobenzene	Ave	0.7205	0.6913		1.00	0.0100	-4.1	50.0
1,2,4-Trichlorobenzene	Ave	0.5829	0.4449		1.00	0.0100	-23.7	50.0
Hexachlorobutadiene	Ave	0.3055	0.2623		1.00	0.0100	-14.2	50.0
Naphthalene	Lin1		0.6373		1.00	0.0100	-51.0*	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVIS 240-80086/2 Calibration Date: 04/01/2013 11:53

Instrument ID: A3UX10 Calib Start Date: 02/11/2013 09:40

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/11/2013 11:29

Lab File ID: UXX3010.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5369	0.2633		1.00	0.0100	-51.0*	50.0
Dibromofluoromethane (Surr)	Ave	0.2736	0.2572		0.00940	0.0100	-6.0	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3629	0.2598		0.00716	0.0100	-28.4	50.0
Toluene-d8 (Surr)	Ave	1.412	1.209		0.00856	0.0100	-14.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4562	0.4475		0.00981	0.0100	-1.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCV 240-80086/3 Calibration Date: 04/01/2013 12:15

Instrument ID: A3UX10 Calib Start Date: 02/11/2013 11:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/11/2013 13:39

Lab File ID: UXX3011.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.6369	0.4868		2.00	0.0100	-23.6	50.0
Ethyl ether	Ave	0.3134	0.2112		2.00	0.0100	-32.6	50.0
3-Chloro-1-propene	Ave	0.1352	0.1377		2.00	0.0100	1.8	50.0
Diisopropyl ether	Ave	0.2502	0.2438		10.0	0.0500	-2.5	50.0
2-Chloro-1,3-butadiene	Ave	0.4125	0.3573		2.00	0.0100	-13.4	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7247	0.6002		5.00	0.0100	-17.2	50.0
Propionitrile	Ave	0.0278	0.0212		4.00	0.0200	-23.5	50.0
Ethyl acetate	Ave	0.1698	0.1274		4.00	0.0200	-24.9	50.0
Methacrylonitrile	Ave	0.1239	0.0899		2.00	0.0100	-27.4	50.0
Isobutyl alcohol	Ave	0.0076	0.0048		50.0	0.200	-36.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.6410	0.5606		5.00	0.0100	-12.5	50.0
n-Heptane	Ave	0.0498	0.0407		1.00	0.0100	-18.3	50.0
n-Butanol	Ave	0.0059	0.0039		50.0	0.200	-34.2	50.0
Methyl methacrylate	Ave	0.1461	0.1036		2.00	0.0100	-29.1	50.0
2-Nitropropane	Ave	0.0409	0.0278		2.00	0.0200	-31.9	50.0
Cyclohexanone	Ave	0.0493	0.0499		20.0	0.100	1.1	50.0
1,2,3-Trimethylbenzene	Ave	2.201	2.195		0.00997	0.0100	-0.3	50.0
2-Methylnaphthalene	Ave	0.4458	0.0045		5.00	0.0200	-99.0*	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: BFB012A.D BFB Injection Date: 11/19/2012

Instrument ID: A3UX15 BFB Injection Time: 14:21

Analysis Batch No.: 65607

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.7	
75	30.0 - 60.0 % of mass 95	50.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.3	(0.3)1
174	50.0 - 120.00 % of mass 95	93.7	
175	5.0 - 9.0 % of mass 174	6.0	(6.4)1
176	95.0 - 101.0 % of mass 174	90.4	(96.5)1
177	5.0 - 9.0 % of mass 176	6.2	(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-65607/8	UXC7827.D	11/19/2012	17:27
	STD5 240-65607/9	UXC7828.D	11/19/2012	17:49
	STD4 240-65607/10	UXC7829.D	11/19/2012	18:12
	STD3 240-65607/11	UXC7830.D	11/19/2012	18:34
	STD2 240-65607/12	UXC7831.D	11/19/2012	18:56
	STD1 240-65607/13	UXC7832.D	11/19/2012	19:18

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 65607

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2012 17:27 Calibration End Date: 11/19/2012 19:18 Calibration ID: 12428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-65607/13	UXC7832.D
Level 2	STD2 240-65607/12	UXC7831.D
Level 3	STD3 240-65607/11	UXC7830.D
Level 4	STD4 240-65607/10	UXC7829.D
Level 5	STD5 240-65607/9	UXC7828.D
Level 6	STD6 240-65607/8	UXC7827.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	1.1427 0.9776	1.0281	1.0040	0.9952	1.0000	Ave		1.0246				5.9		15.0			
Ethyl ether	0.3525 0.2947	0.3110	0.3087	0.3009	0.3043	Ave		0.3120				6.6		15.0			
3-Chloro-1-propene	0.1571 0.1816	0.1552	0.1636	0.1731	0.1795	Ave		0.1683				6.7		15.0			
Diisopropyl ether	0.3035 0.3362	0.2819	0.2952	0.3053	0.3174	Ave		0.3066				6.1		15.0			
2-Chloro-1,3-butadiene	0.5277 0.5535	0.5207	0.5089	0.5349	0.5429	Ave		0.5314				3.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.6814 0.6761	0.6325	0.6412	0.6545	0.6729	Ave		0.6598				3.0		15.0			
Ethyl acetate	0.1177 0.1087	0.0815	0.0921	0.1014	0.1089	Ave		0.1017				13.0		15.0			
Propionitrile	0.0284 0.0249	0.0223	0.0233	0.0251	0.0247	Ave		0.0248				8.4		15.0			
Methacrylonitrile	0.1214 0.0979	0.0824	0.0973	0.1008	0.1002	Ave		0.1000				13.0		15.0			
Isobutyl alcohol	0.0039 0.0037	0.0026	0.0036	0.0039	0.0039	Ave		0.0036				14.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4767 0.5120	0.4616	0.4663	0.4792	0.4982	Ave		0.4823				4.0		15.0			
n-Heptane	0.0684 0.0692	0.0735	0.0593	0.0666	0.0673	Ave		0.0674				6.9		15.0			
n-Butanol	0.0027 0.0023	0.0012	0.0026	0.0026	0.0026	Qua	-0.039	0.0030	X 0						0.9990		0.9900
Methyl methacrylate	0.1103 0.0945	0.0822	0.0950	0.0873	0.0957	Ave		0.0942				10.0		15.0			
2-Nitropropane	0.0171 0.0097	0.0117	0.0146	0.0121	0.0089	Qua	0.0327	0.0085	X 0						0.9900		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 65607

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2012 17:27 Calibration End Date: 11/19/2012 19:18 Calibration ID: 12428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0367 0.0561	0.0215	0.0398	0.0514	0.0532	Lin1	-0.401	0.0556							0.9930		0.9900
1,2,3-Trimethylbenzene	2.4615 3.0757	2.2968	2.6054	2.7382	2.9466	Ave		2.6874				11.0		15.0			
2-Methylnaphthalene	0.5462 0.6853	0.4981	0.5957	0.7001	0.7922	Lin1	-0.560	0.7238							0.9930		0.9900
n-Butyl acetate	0.1163 0.1506	0.0999	0.1239	0.1245	0.1470	Ave		0.1270				15.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: BFB029.D BFB Injection Date: 12/10/2012

Instrument ID: A3UX15 BFB Injection Time: 12:37

Analysis Batch No.: 68014

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.9	
75	30.0 - 60.0 % of mass 95	48.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.5	(0.6)1
174	50.0 - 120.00 % of mass 95	87.5	
175	5.0 - 9.0 % of mass 174	5.8	(6.6)1
176	95.0 - 101.0 % of mass 174	83.8	(95.8)1
177	5.0 - 9.0 % of mass 176	5.3	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-68014/2	UXC8353.D	12/10/2012	13:02
	STD8260 240-68014/3	UXC8354.D	12/10/2012	13:24
	STD8260 240-68014/4	UXC8355.D	12/10/2012	13:47
	STD8260 240-68014/5	UXC8356.D	12/10/2012	14:09
	STD8260 240-68014/6	UXC8357.D	12/10/2012	14:32
	STD8260 240-68014/7	UXC8358.D	12/10/2012	14:55
	ICV 240-68014/8	UXC8359.D	12/10/2012	15:17

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-22303-1 | Analy Batch No.: 68014

SDG No.:

Instrument ID: A3UX15 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 12/10/2012 13:02 | Calibration End Date: 12/10/2012 14:55 | Calibration ID: 12745

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-68014/7	UXC8358.D
Level 2	STD8260 240-68014/6	UXC8357.D
Level 3	STD8260 240-68014/5	UXC8356.D
Level 4	STD8260 240-68014/4	UXC8355.D
Level 5	STD8260 240-68014/3	UXC8354.D
Level 6	STD8260 240-68014/2	UXC8353.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3609 0.3617	0.3856	0.4163	0.3583	0.3773	Ave		0.3767				5.9		15.0			
Chloromethane	0.5739 0.4221	0.5533	0.5180	0.4575	0.4467	Ave		0.4952			0.1000	13.0		15.0			
Vinyl chloride	0.5995 0.4787	0.5832	0.5597	0.4946	0.5053	Ave		0.5368				9.4		15.0			
Bromomethane	0.3660 0.4331	0.3782	0.3489	0.3782	0.3693	Ave		0.3790				7.5		15.0			
Chloroethane	0.3558 0.3932	0.3555	0.3348	0.3381	0.3474	Ave		0.3541				5.9		15.0			
Trichlorofluoromethane	0.6946 0.7769	0.7226	0.7482	0.6870	0.7372	Ave		0.7278				4.6		15.0			
Acrolein	0.0309 0.0441	0.0328	0.0325	0.0402	0.0411	Ave		0.0369	X			15.0		15.0			
1,1-Dichloroethene	0.4093 0.4708	0.3642	0.4490	0.3653	0.3563	Ave		0.4025				12.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.3199 0.4158	0.3393	0.3584	0.3034	0.3314	Ave		0.3447				11.0		15.0			
Acetone	0.0480 0.0576	0.0608	0.0403	0.0512	0.0557	Ave		0.0523				14.0		15.0			
Iodomethane	0.6679 0.6654	0.6623	0.6519	0.6628	0.6524	Ave		0.6605				1.0		15.0			
Carbon disulfide	1.1110 1.1464	1.0598	1.0688	1.0644	1.0769	Ave		1.0879				3.1		15.0			
Acetonitrile	0.0056 0.0176	0.0184	0.0093	0.0161	0.0173	Qua	-0.146	0.0173	X 0						0.9970		0.9900
Methyl acetate	0.1091 0.1351	0.1476	0.1192	0.1363	0.1360	Ave		0.1306				11.0		15.0			
Methylene Chloride	0.6151 0.3663	0.5239	0.4276	0.3989	0.3785	Lin1	0.2842	0.3629							1.0000		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 68014

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/10/2012 13:02 Calibration End Date: 12/10/2012 14:55 Calibration ID: 12745

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0028 0.0061	0.0069	0.0030	0.0063	0.0068	Qua	-0.172	0.0076	0						0.9940		0.9900
Acrylonitrile	0.0585 0.0782	0.0824	0.0655	0.0740	0.0806	Ave		0.0732				13.0		15.0			
trans-1,2-Dichloroethene	0.3939 0.3730	0.3919	0.3911	0.3797	0.3793	Ave		0.3848				2.2		15.0			
Methyl tert-butyl ether	0.5267 0.5620	0.5938	0.5499	0.5665	0.5749	Ave		0.5623				4.0		15.0			
Hexane	0.0753 0.0747	0.0797	0.0747	0.0731	0.0782	Ave		0.0760				3.3		15.0			
1,1-Dichloroethane	0.5898 0.5565	0.6069	0.5992	0.5745	0.5688	Ave		0.5826			0.1000	3.3		15.0			
Vinyl acetate	0.0282 0.0331	0.0276	0.0283	0.0331	0.0344	Ave		0.0308				9.9		15.0			
2,2-Dichloropropane	0.2083 0.2181	0.2246	0.2130	0.2241	0.2357	Ave		0.2206				4.4		15.0			
cis-1,2-Dichloroethene	0.3753 0.3896	0.4139	0.4128	0.3948	0.3956	Ave		0.3970				3.7		15.0			
2-Butanone	0.0689 0.0763	0.0780	0.0645	0.0749	0.0775	Ave		0.0733				7.5		15.0			
Bromochloromethane	0.1864 0.1738	0.1880	0.1901	0.1854	0.1859	Ave		0.1849				3.1		15.0			
Tetrahydrofuran	0.0278 0.0441	0.0462	0.0414	0.0414	0.0454	Lin1	-0.011	0.0446							0.9980		0.9900
Chloroform	0.6544 0.5869	0.6521	0.6383	0.6051	0.6068	Ave		0.6239				4.5		15.0			
1,1,1-Trichloroethane	0.3666 0.4217	0.4108	0.4030	0.4194	0.4315	Ave		0.4089				5.6		15.0			
Cyclohexane	0.5694 0.5513	0.5733	0.5556	0.5488	0.5578	Ave		0.5594				1.8		15.0			
1,1-Dichloropropene	0.4610 0.4506	0.4712	0.4686	0.4560	0.4730	Ave		0.4634				1.9		15.0			
Carbon tetrachloride	0.2981 0.3589	0.3148	0.3106	0.3302	0.3634	Ave		0.3293				8.1		15.0			
Benzene	1.4053 1.3558	1.4474	1.3709	1.3546	1.3739	Ave		1.3847				2.6		15.0			
1,2-Dichloroethane	0.3518 0.3670	0.3880	0.3789	0.3730	0.3854	Ave		0.3740				3.6		15.0			
Trichloroethene	0.3702 0.3790	0.3928	0.3857	0.3737	0.3912	Ave		0.3821				2.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 68014

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/10/2012 13:02 Calibration End Date: 12/10/2012 14:55 Calibration ID: 12745

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5600 0.5407	0.5720	0.5348	0.5332	0.5479	Ave		0.5481				2.8		15.0			
1,2-Dichloropropane	0.2607 0.2832	0.2767	0.2713	0.2756	0.2901	Ave		0.2763				3.7		15.0			
Dibromomethane	0.1481 0.1587	0.1730	0.1650	0.1610	0.1622	Ave		0.1613				5.0		15.0			
1,4-Dioxane	0.0007 0.0018	0.0017	0.0008	0.0018	0.0020	Qua	-0.147	0.0023	0						0.9930		0.9900
Bromodichloromethane	0.2713 0.3414	0.3041	0.3088	0.3043	0.3392	Ave		0.3115				8.4		15.0			
2-Chloroethyl vinyl ether	0.0821 0.1135	0.0937	0.0959	0.0924	0.1099	Ave		0.0979				12.0		15.0			
cis-1,3-Dichloropropene	0.2147 0.3448	0.2217	0.2524	0.2684	0.3240	Lin1	-0.203	0.3345							0.9930		0.9900
4-Methyl-2-pentanone	0.0983 0.1358	0.1181	0.1092	0.1319	0.1363	Ave		0.1216				13.0		15.0			
Toluene	1.7486 1.9334	1.8824	1.8448	1.9469	1.9369	Ave		1.8822				4.1		15.0			
trans-1,3-Dichloropropene	0.2382 0.3266	0.2023	0.2391	0.2653	0.3094	Lin1	-0.174	0.3177							0.9930		0.9900
Ethyl methacrylate	0.2009 0.2843	0.2037	0.2186	0.2538	0.2862	Lin1	-0.137	0.2841							0.9970		0.9900
1,1,2-Trichloroethane	0.2538 0.2738	0.2823	0.2731	0.2843	0.2882	Ave		0.2759				4.5		15.0			
Tetrachloroethene	0.4102 0.4072	0.3862	0.3917	0.4156	0.4172	Ave		0.4047				3.2		15.0			
1,3-Dichloropropane	0.4697 0.4794	0.4648	0.4846	0.4879	0.4886	Ave		0.4791				2.1		15.0			
2-Hexanone	0.0844 0.1103	0.1069	0.1057	0.1117	0.1151	Ave		0.1057				10.0		15.0			
Dibromochloromethane	0.2032 0.3005	0.2315	0.2360	0.2585	0.2856	Ave		0.2525				14.0		15.0			
1,2-Dibromoethane	0.2545 0.2762	0.2498	0.2566	0.2820	0.2867	Ave		0.2676				5.9		15.0			
Chlorobenzene	1.2561 1.1874	1.2266	1.2077	1.2046	1.2185	Ave		1.2168			0.3000	1.9		15.0			
1,1,1,2-Tetrachloroethane	0.2697 0.3774	0.3076	0.3226	0.3482	0.3765	Ave		0.3337				13.0		15.0			
Ethylbenzene	0.5963 0.6654	0.6592	0.6573	0.6785	0.6881	Ave		0.6575				4.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 68014

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/10/2012 13:02 Calibration End Date: 12/10/2012 14:55 Calibration ID: 12745

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4488 1.4915	1.5149	1.5627	1.5953	1.6578	Ave		1.5452				4.9		15.0			
o-Xylene	0.7819 0.8258	0.8116	0.8149	0.8539	0.8582	Ave		0.8244				3.5		15.0			
Styrene	1.1953 1.3437	1.2213	1.2900	1.3212	1.3691	Ave		1.2901				5.3		15.0			
Bromoform	0.1064 0.1690	0.1192	0.1246	0.1379	0.1592	Lin1	-0.091	0.1646			0.1000				0.9950		0.9900
Isopropylbenzene	1.8308 2.1130	1.9898	1.9712	2.0638	2.1578	Ave		2.0211				5.8		15.0			
Bromobenzene	0.8382 0.8314	0.8686	0.8596	0.8310	0.8363	Ave		0.8442				1.9		15.0			
1,1,2,2-Tetrachloroethane	0.5609 0.5023	0.5594	0.5314	0.5131	0.5171	Ave		0.5307			0.3000	4.6		15.0			
1,2,3-Trichloropropane	0.1695 0.1610	0.1862	0.1746	0.1678	0.1673	Ave		0.1711				5.0		15.0			
trans-1,4-Dichloro-2-butene	0.0625 0.0929	0.0744	0.0716	0.0693	0.0809	Ave		0.0753				14.0		15.0			
n-Propylbenzene	0.8358 0.8437	0.8156	0.8761	0.8391	0.8385	Ave		0.8415				2.3		15.0			
2-Chlorotoluene	0.7922 0.7661	0.7713	0.8134	0.7878	0.7816	Ave		0.7854				2.1		15.0			
1,3,5-Trimethylbenzene	2.2594 2.5513	2.4002	2.5679	2.5268	2.5655	Ave		2.4785				5.0		15.0			
4-Chlorotoluene	2.4030 2.4547	2.4897	2.6146	2.4011	2.4437	Ave		2.4678				3.2		15.0			
tert-Butylbenzene	1.9465 2.1609	2.0075	2.1184	2.1593	2.2216	Ave		2.1023				5.0		15.0			
1,2,4-Trimethylbenzene	2.3917 2.5759	2.5215	2.6664	2.6169	2.6118	Ave		2.5640				3.8		15.0			
sec-Butylbenzene	3.0059 2.9702	2.8898	3.0737	3.0092	3.0390	Ave		2.9980				2.1		15.0			
1,3-Dichlorobenzene	1.7427 1.6071	1.7453	1.7399	1.6607	1.6370	Ave		1.6888				3.6		15.0			
p-Isopropyltoluene	2.3981 2.6218	2.5446	2.6977	2.6929	2.6864	Ave		2.6069				4.5		15.0			
1,4-Dichlorobenzene	1.9887 1.6904	1.8955	1.7812	1.7360	1.7349	Ave		1.8045				6.3		15.0			
1,2-Dichlorobenzene	1.6308 1.5233	1.6653	1.6789	1.5863	1.5719	Ave		1.6094				3.7		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 68014

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/10/2012 13:02 Calibration End Date: 12/10/2012 14:55 Calibration ID: 12745

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.0642 2.2588	2.1735	2.2475	2.2905	2.2686	Ave		2.2172				3.8		15.0			
1,2-Dibromo-3-Chloropropane	0.0656 0.0656	0.0666	0.0593	0.0687	0.0719	Ave		0.0663				6.3		15.0			
1,3,5-Trichlorobenzene	1.1162 0.8706	1.0789	1.0624	1.1656	1.0363	Ave		1.0550				9.6		15.0			
1,2,4-Trichlorobenzene	0.7686 0.6146	0.7580	0.8151	0.8860	0.7580	Ave		0.7667				12.0		15.0			
Hexachlorobutadiene	0.5380 0.3145	0.5319	0.4859	0.5439	0.4645	Qua	-0.207	0.6283	-0.008						0.9990		0.9900
Naphthalene	1.1423 1.0698	1.2791	1.3482	1.6405	1.3355	Ave		1.3026				15.0		15.0			
1,2,3-Trichlorobenzene	0.6728 0.3661	0.6534	0.6429	0.7050	0.5310	Qua	-0.031	0.7367	-0.009						0.9960		0.9900
Dibromofluoromethane (Surr)	0.3073 0.3106	0.3165	0.3246	0.3170	0.3210	Ave		0.3162				2.0		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2926 0.2979	0.3302	0.3212	0.3091	0.3051	Ave		0.3094				4.6		15.0			
Toluene-d8 (Surr)	1.4446 1.6368	1.4594	1.5852	1.6192	1.6201	Ave		1.5609				5.5		15.0			
4-Bromofluorobenzene (Surr)	0.5005 0.5112	0.4921	0.5451	0.5254	0.5372	Ave		0.5186				4.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab File ID: BFB098.D BFB Injection Date: 03/30/2013

Instrument ID: A3UX15 BFB Injection Time: 08:38

Analysis Batch No.: 79987

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.4	
75	30.0 - 60.0 % of mass 95	50.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.4	(0.4)1
174	50.0 - 120.00 % of mass 95	92.1	
175	5.0 - 9.0 % of mass 174	5.9	(6.4)1
176	95.0 - 101.0 % of mass 174	88.4	(96.0)1
177	5.0 - 9.0 % of mass 176	5.6	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-79987/2	UXC0284.D	03/30/2013	09:00
	CCV 240-79987/3	UXC0285.D	03/30/2013	09:22
	LCS 240-79987/4	UXC0286.D	03/30/2013	09:45
	MB 240-79987/5	UXC0287.D	03/30/2013	10:08
	MB 240-79987/6	UXC0288.D	03/30/2013	10:30
TB-032113	240-22303-1	UXC0306.D	03/30/2013	17:46
MRC-MW34B-032113	240-22303-2	UXC0307.D	03/30/2013	18:09
MRC-MW34C-032113	240-22303-3	UXC0308.D	03/30/2013	18:31
	240-22295-B-2 MS	UXC0309.D	03/30/2013	18:53
	240-22295-B-2 MSD	UXC0310.D	03/30/2013	19:16

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVIS 240-79987/2 Calibration Date: 03/30/2013 09:00

Instrument ID: A3UX15 Calib Start Date: 12/10/2012 13:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/10/2012 14:55

Lab File ID: UXC0284.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3767	0.4306		1.00	0.0100	14.3	50.0
Chloromethane	Ave	0.4952	0.5686	0.1000	1.00	0.0100	14.8	50.0
Vinyl chloride	Ave	0.5368	0.6066		1.00	0.0100	13.0	20.0
Bromomethane	Ave	0.3790	0.4574		1.00	0.0100	20.7	50.0
Chloroethane	Ave	0.3541	0.3937		1.00	0.0100	11.2	50.0
Trichlorofluoromethane	Ave	0.7278	0.6099		1.00	0.0100	-16.2	50.0
Acrolein	Ave	0.0369	0.0359		20.0	0.100	-2.9	50.0
1,1-Dichloroethene	Ave	0.4025	0.3599		1.00	0.0100	-10.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.3447	0.3026		1.00	0.0100	-12.2	50.0
Acetone	Ave	0.0523	0.0678		10.0	0.0200	29.8	50.0
Iodomethane	Ave	0.6605	0.5904		1.00	0.0100	-10.6	50.0
Carbon disulfide	Ave	1.088	0.8984		1.00	0.0100	-17.4	50.0
Acetonitrile	Qua		0.0289		20.0	0.100	72.0*	50.0
Methyl acetate	Ave	0.1306	0.1396		10.0	0.0200	6.9	50.0
Methylene Chloride	Lin1		0.4175		1.00	0.0100	7.2	50.0
tert-Butyl alcohol	Qua		0.0091		50.0	0.200	38.9	50.0
Acrylonitrile	Ave	0.0732	0.0852		20.0	0.0200	16.4	50.0
trans-1,2-Dichloroethene	Ave	0.3848	0.3583		1.00	0.0100	-6.9	50.0
Methyl tert-butyl ether	Ave	0.5623	0.6306		1.00	0.0100	12.1	50.0
Hexane	Ave	0.0760	0.0668		1.00	0.0100	-12.1	20.0
1,1-Dichloroethane	Ave	0.5826	0.5566	0.1000	1.00	0.0100	-4.5	50.0
Vinyl acetate	Ave	0.0308	0.0301		2.00	0.0100	-2.3	50.0
2,2-Dichloropropane	Ave	0.2206	0.2916		1.00	0.0100	32.1	50.0
cis-1,2-Dichloroethene	Ave	0.3970	0.3664		1.00	0.0100	-7.7	50.0
2-Butanone	Ave	0.0733	0.0836		10.0	0.0200	14.0	50.0
Bromochloromethane	Ave	0.1849	0.1653		1.00	0.0100	-10.6	50.0
Tetrahydrofuran	Lin1		0.0431		5.00	0.0100	-0.9	50.0
Chloroform	Ave	0.6239	0.5658		1.00	0.0100	-9.3	20.0
1,1,1-Trichloroethane	Ave	0.4089	0.4445		1.00	0.0100	8.7	50.0
Cyclohexane	Ave	0.5594	0.5681		1.00	0.0100	1.6	50.0
1,1-Dichloropropene	Ave	0.4634	0.4104		1.00	0.0100	-11.4	50.0
Carbon tetrachloride	Ave	0.3293	0.3692		1.00	0.0100	12.1	50.0
Benzene	Ave	1.385	1.302		1.00	0.0100	-6.0	50.0
1,2-Dichloroethane	Ave	0.3740	0.3529		1.00	0.0100	-5.6	50.0
Trichloroethene	Ave	0.3821	0.3094		1.00	0.0100	-19.0	50.0
Methylcyclohexane	Ave	0.5481	0.5297		1.00	0.0100	-3.4	50.0
1,2-Dichloropropane	Ave	0.2763	0.2834		1.00	0.0100	2.6	20.0
Dibromomethane	Ave	0.1613	0.1528		1.00	0.0100	-5.3	50.0
1,4-Dioxane	Qua		0.0021		50.0	0.500	8.9	50.0
Bromodichloromethane	Ave	0.3115	0.2853		1.00	0.0100	-8.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVIS 240-79987/2 Calibration Date: 03/30/2013 09:00

Instrument ID: A3UX15 Calib Start Date: 12/10/2012 13:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/10/2012 14:55

Lab File ID: UXC0284.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.0979	0.1014		10.0	0.0200	3.5	50.0
cis-1,3-Dichloropropene	Lin1		0.2914		1.00	0.0100	-6.8	50.0
4-Methyl-2-pentanone	Ave	0.1216	0.1407		10.0	0.0200	15.7	50.0
Toluene	Ave	1.882	1.892		1.00	0.0100	0.5	20.0
trans-1,3-Dichloropropene	Lin1		0.3109		1.00	0.0100	3.3	50.0
Ethyl methacrylate	Lin1		0.3022		1.00	0.0100	11.2	50.0
1,1,2-Trichloroethane	Ave	0.2759	0.2832		1.00	0.0100	2.7	50.0
Tetrachloroethene	Ave	0.4047	0.3783		1.00	0.0100	-6.5	50.0
1,3-Dichloropropane	Ave	0.4791	0.5295		1.00	0.0100	10.5	50.0
2-Hexanone	Ave	0.1057	0.1399		10.0	0.0200	32.4	50.0
Dibromochloromethane	Ave	0.2525	0.2602		1.00	0.0100	3.0	50.0
1,2-Dibromoethane	Ave	0.2676	0.2870		1.00	0.0100	7.2	50.0
Chlorobenzene	Ave	1.217	1.212	0.3000	1.00	0.0100	-0.4	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3337	0.3795		1.00	0.0100	13.8	50.0
Ethylbenzene	Ave	0.6575	0.6690		1.00	0.0100	1.7	20.0
m-Xylene & p-Xylene	Ave	1.545	1.654		2.00	0.0200	7.1	50.0
o-Xylene	Ave	0.8244	0.8513		1.00	0.0100	3.3	50.0
Styrene	Ave	1.290	1.354		1.00	0.0100	5.0	50.0
Bromoform	Lin1		0.1423	0.1000	1.00	0.0100	-8.0	50.0
Isopropylbenzene	Ave	2.021	2.133		1.00	0.0100	5.6	50.0
Bromobenzene	Ave	0.8442	0.8273		1.00	0.0100	-2.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.5307	0.5927	0.3000	1.00	0.0100	11.7	50.0
1,2,3-Trichloropropane	Ave	0.1711	0.1841		1.00	0.0100	7.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.0753	0.0865		1.00	0.0100	14.9	50.0
n-Propylbenzene	Ave	0.8415	0.8704		1.00	0.0100	3.4	50.0
2-Chlorotoluene	Ave	0.7854	0.8145		1.00	0.0100	3.7	50.0
1,3,5-Trimethylbenzene	Ave	2.479	2.628		1.00	0.0100	6.0	50.0
4-Chlorotoluene	Ave	2.468	2.611		1.00	0.0100	5.8	50.0
tert-Butylbenzene	Ave	2.102	2.182		1.00	0.0100	3.8	50.0
1,2,4-Trimethylbenzene	Ave	2.564	2.780		1.00	0.0100	8.4	50.0
sec-Butylbenzene	Ave	2.998	3.282		1.00	0.0100	9.5	50.0
1,3-Dichlorobenzene	Ave	1.689	1.657		1.00	0.0100	-1.9	50.0
p-Isopropyltoluene	Ave	2.607	2.785		1.00	0.0100	6.8	50.0
1,4-Dichlorobenzene	Ave	1.804	1.757		1.00	0.0100	-2.7	50.0
1,2-Dichlorobenzene	Ave	1.609	1.609		1.00	0.0100	-0.0	50.0
n-Butylbenzene	Ave	2.217	2.464		1.00	0.0100	11.2	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0663	0.0641		2.00	0.0100	-3.3	50.0
1,3,5-Trichlorobenzene	Ave	1.055	1.080		1.00	0.0100	2.3	50.0
1,2,4-Trichlorobenzene	Ave	0.7667	0.6712		1.00	0.0100	-12.5	50.0
Hexachlorobutadiene	Qua		0.5098		1.00	0.0100	-4.3	50.0
Naphthalene	Ave	1.303	1.167		1.00	0.0100	-10.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVIS 240-79987/2 Calibration Date: 03/30/2013 09:00

Instrument ID: A3UX15 Calib Start Date: 12/10/2012 13:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 12/10/2012 14:55

Lab File ID: UXC0284.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Qua		0.5811		1.00	0.0100	-10.6	50.0
Dibromofluoromethane (Surr)	Ave	0.3162	0.2723		0.00767	0.00890	-13.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3094	0.2753		0.00792	0.00890	-11.0	50.0
Toluene-d8 (Surr)	Ave	1.561	1.593		0.00908	0.00890	2.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5186	0.5459		0.00937	0.00890	5.3	50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Sample No.: STD8260 240-74846/4 Date Analyzed: 02/11/2013 10:24

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX2338.D Heated Purge: (Y/N) N

Calibration ID: 13632

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1676113	5.21	1251917	7.88	686055	10.12
UPPER LIMIT		3352226	5.71	2503834	8.38	1372110	10.62
LOWER LIMIT		838057	4.71	625959	7.38	343028	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-74846/14		1488493	5.21	1077573	7.88	625019	10.12
CCVIS 240-80086/2		2200719	5.21	1663003	7.88	1042704	10.12

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Sample No.: CCVIS 240-80086/2 Date Analyzed: 04/01/2013 11:53

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX3010.D Heated Purge: (Y/N) N

Calibration ID: 13634

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2200719	5.21	1663003	7.88	1042704	10.12
UPPER LIMIT		4401438	5.71	3326006	8.38	2085408	10.62
LOWER LIMIT		1100360	4.71	831502	7.38	521352	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-80086/3		2200982	5.20	1598423	7.87	837700	10.12
LCS 240-80086/4		2117486	5.21	1586062	7.88	952819	10.12
MB 240-80086/6		2007160	5.21	1522147	7.88	781157	10.13
240-22303-4	MRC-MW74A-032113	1968723	5.21	1433128	7.88	701740	10.12
240-22303-6	MRC-MW104A-032113	1805304	5.21	1338036	7.88	658135	10.12
240-22303-7	MRC-MW104B-032113	1880406	5.20	1323371	7.87	678340	10.12
240-22303-8	MRC-MW37B-032113	1855242	5.20	1352640	7.87	656063	10.12
240-22303-9	MRC-MW37C-032113	1787488	5.21	1280304	7.88	698467	10.13
240-22303-10	MRC-MW93A-032113	1661138	5.21	1280662	7.88	662723	10.12
240-22303-5	MRC-MW74B-032113	1577473	5.21	1219322	7.88	658332	10.12
240-22375-B-7 MS		1921660	5.20	1407917	7.88	897926	10.12
240-22375-B-7 MSD		1955352	5.21	1412524	7.88	916164	10.12

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Sample No.: STD8260 240-68014/4 Date Analyzed: 12/10/2012 13:47

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC8355.D Heated Purge: (Y/N) N

Calibration ID: 12745

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1603012	4.66	1086499	7.30	742476	9.51
UPPER LIMIT		3206024	5.16	2172998	7.80	1484952	10.01
LOWER LIMIT		801506	4.16	543250	6.80	371238	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-68014/8		1494095	4.66	983203	7.30	661957	9.51
CCVIS 240-79987/2		1281655	4.66	877734	7.30	593096	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Sample No.: CCVIS 240-79987/2 Date Analyzed: 03/30/2013 09:00

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0284.D Heated Purge: (Y/N) N

Calibration ID: 12745

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1281655	4.66	877734	7.30	593096	9.51
UPPER LIMIT		2563310	5.16	1755468	7.80	1186192	10.01
LOWER LIMIT		640828	4.16	438867	6.80	296548	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-79987/3		1296188	4.66	905791	7.30	482768	9.51
LCS 240-79987/4		1352677	4.66	920047	7.30	615690	9.51
MB 240-79987/5		1268911	4.66	912560	7.30	437532	9.51
MB 240-79987/6		1254017	4.66	893083	7.30	434498	9.51
240-22303-1	TB-032113	1110994	4.66	812110	7.30	398568	9.51
240-22303-2	MRC-MW34B-032113	1041676	4.66	747747	7.30	366851	9.51
240-22303-3	MRC-MW34C-032113	1177218	4.66	826878	7.30	377132	9.51
240-22295-B-2 MS		1210932	4.66	832205	7.30	572287	9.51
240-22295-B-2 MSD		1397924	4.66	875816	7.30	570098	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: MB 240-79468/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0032605.D Lab File ID:(2)

Date Analyzed:(1) 03/26/2013 12:43 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-79468/4	03/26/2013 12:31	
	240-22349-E-6 MS	03/26/2013 13:44	
	240-22349-E-6 MSD	03/26/2013 13:57	
MRC-MW34B-032113	240-22303-2	03/26/2013 15:10	
MRC-MW37B-032113	240-22303-8	03/26/2013 15:22	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79468/5

Matrix: Water | Lab File ID: Z0032605.D

Analysis Method: RSK-175 | Date Collected:

Sample wt/vol: 17(mL) | Date Analyzed: 03/26/2013 12:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79468 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.50	U	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	107		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032604.D

Lab ID: LCS 240-79468/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	212	104	64-130	
Ethane	218	222	102	77-127	
Methane	116	106	92	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032610.D

Lab ID: 240-22349-E-6 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	4270	99	4220	97	51-129	
Ethane	4570	6.3 J	4450	97	59-133	
Methane	2430	10000	13900	150	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032611.D

Lab ID: 240-22349-E-6 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	4270	4270	98	1	34	51-129	
Ethane	4570	4510	98	1	34	59-133	
Methane	2430	14300	165	3	42	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW34B-032113	240-22303-2	95
MRC-MW37B-032113	240-22303-8	90
	MB 240-79468/5	107
	LCS 240-79468/4	109
	240-22349-E-6 MS	102
	240-22349-E-6 MSD	101

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Sample No.: CCVRT 240-79468/3 Date Analyzed: 03/26/2013 12:19

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0032603.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.70		
UPPER LIMIT				2.75		
LOWER LIMIT				2.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-79468/3		03/26/2013 12:19	Z0032603.D	2.70		
LCS 240-79468/4		03/26/2013 12:31	Z0032604.D	2.70		
MB 240-79468/5		03/26/2013 12:43	Z0032605.D	2.70		
240-22349-E-6 MS		03/26/2013 13:44	Z0032610.D	2.70		
240-22349-E-6 MSD		03/26/2013 13:57	Z0032611.D	2.70		
240-22303-2	MRC-MW34B-032113	03/26/2013 15:10	Z0032617.D	2.70		
240-22303-8	MRC-MW37B-032113	03/26/2013 15:22	Z0032618.D	2.70		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9	RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909	0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392	1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489	1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655	1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512	3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705	3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319	5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657		2.572 - 2.772	2.699

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVRT 240-79468/3 Calibration Date: 03/26/2013 12:19

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0032603.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	102458		105	116	-8.9	30.0
Ethene	Ave	94091	93625		202	203	-0.5	30.0
Acetylene	Ave	27012	31369		218	188	16.1	30.0
Ethane	Ave	102982	99600		211	218	-3.3	30.0
Propene	Ave	85073	84158		301	305	-1.1	30.0
Propane	Ave	101861	96811		303	319	-5.0	30.0
Propane, 2-methyl	Ave	100175	100674		422	420	0.5	30.0
1,1,1-Trifluoroethane	Ave	37902	41293		2650	2440	8.9	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVRT 240-79468/3 Calibration Date: 03/26/2013 12:19

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0032603.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.40	5.30	5.50
1,1,1-Trifluoroethane	2.70	2.60	2.80

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Lab File ID: 02APR13-perc-066.d Lab Sample ID: MB 320-13458/1-A

Matrix: Water Date Extracted: 04/02/2013 09:49

Instrument ID: A5 Date Analyzed: 04/03/2013 09:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-13458/2-A	02APR13-perc-067.d	04/03/2013 09:18
MRC-MW74A-032113	240-22303-4	02APR13-perc-069.d	04/03/2013 09:51
MRC-MW74A-032113 MS	240-22303-4 MS	02APR13-perc-070.d	04/03/2013 10:07
MRC-MW74A-032113 MSD	240-22303-4 MSD	02APR13-perc-071.d	04/03/2013 10:24
MRC-MW74B-032113	240-22303-5	02APR13-perc-072.d	04/03/2013 10:40

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22303-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-13458/1-A

Matrix: Water | Lab File ID: 02APR13-perc-066.d

Analysis Method: 6850 | Date Collected:

Extraction Method: Filtration | Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/03/2013 09:01

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 80(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-067.d

Lab ID: LCS 320-13458/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	5.08	102	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-070.d

Lab ID: 240-22303-4 MS Client ID: MRC-MW74A-032113 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.50 U	4.74	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-071.d

Lab ID: 240-22303-4 MSD Client ID: MRC-MW74A-032113 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	4.80	96	1	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-068.d

Lab ID: INF 320-13458/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.82	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/11

Matrix: Water Lab File ID: 02APR13-perc-013.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/02/2013 18:26

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/62

Matrix: Water Lab File ID: 02APR13-perc-064.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/03/2013 08:28

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/79

Matrix: Water Lab File ID: 02APR13-perc-081.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/03/2013 13:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/02/2013 18:10

Calibration ID: 2501

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		174201778	9.98				
UPPER LIMIT		261302667	10.98				
LOWER LIMIT		87100889	8.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-13496/11		183986481	9.98				
ICV 320-13496/12		178010087	9.98				
CCB 320-13496/62		171394587	9.98				
CCVL 320-13496/63		179384534	10.00				
MB 320-13458/1-A		178957593	9.98				
LCS 320-13458/2-A		157475265	9.98				
INF 320-13458/3-A		160252234	9.91				
240-22303-4	MRC-MW74A-032113	173032547	9.93				
240-22303-4 MS	MRC-MW74A-032113 MS	165720309	9.91				
240-22303-4 MSD	MRC-MW74A-032113 MSD	184204219	9.93				
240-22303-5	MRC-MW74B-032113	188283912	9.96				
CCVL 320-13496/77		177450415	10.00				
CCV 320-13496/78		178027486	10.00				
CCB 320-13496/79		175726361	10.00				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.8443 0.7603	0.8106 0.8079	0.7242 0.8387	0.7636	0.7815	Ave		0.7914				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICV 320-13496/12 Calibration Date: 04/02/2013 18:43

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.8179		5.17	5.00	3.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVL 320-13496/63 Calibration Date: 04/03/2013 08:45

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-065.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7859		0.496	0.500	-0.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCVL 320-13496/77 Calibration Date: 04/03/2013 12:36

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-079.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7690		0.486	0.500	-2.8	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22303-1

SDG No.:

Lab Sample ID: CCV 320-13496/78 Calibration Date: 04/03/2013 12:52

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-080.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7780		4.92	5.00	-1.7	15.0

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22303-1

SDG No.:

Instrument ID: I9 Date: 10/16/2012 17:26

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22303-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-96473/1-A	04/08/2013 12:21	96473		20	20
LCS 440-96473/2-A	04/08/2013 12:21	96473		20	20
240-22161-D-3-C MS	04/08/2013 12:21	96473		20	20
240-22161-D-3-D MSD	04/08/2013 12:21	96473		20	20
240-22303-2	04/08/2013 12:21	96473		20	20
240-22303-7	04/08/2013 12:21	96473		20	20
240-22303-10	04/08/2013 12:21	96473		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96473/1-A

Instrument Code: CV-HG2 Batch No.: 96889

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22161-D-3-C MS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.27		0.20	U	8.00	103	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22161-D-3-D MSD

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.31	8.00	104	70-130	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-96473/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00076

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.27		103	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-79873/1-A	03/29/2013 08:10	79873		50	50
LCS 240-79873/2-A	03/29/2013 08:10	79873		50	50
240-22303-8	03/29/2013 08:10	79873		50	50
240-22303-8 MS	03/29/2013 08:10	79873		50	50
240-22303-8 MSD	03/29/2013 08:10	79873		50	50
240-22303-2	03/29/2013 08:10	79873		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-79873/1-A

Instrument Code: I9 Batch No.: 80191

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	139	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	39.8	J		6010C
7439-96-5	Manganese	2.06	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW37B-032113 MS Lab ID: 240-22303-8 MS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	66000		18000		50000	95	75-125		6010C
Iron	1380		390		1000	99	75-125		6010C
Potassium	51500		3100	J	50000	97	75-125		6010C
Magnesium	52500		3900	J	50000	97	75-125		6010C
Manganese	530		37		500	99	75-125		6010C
Sodium	60500		12000		50000	96	75-125		6010C
SiO2, Silica	12000		10000		2140	73	75-125	04	6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW37B-032113 MSD | Lab ID: 240-22303-8 MSD

Lab Name: TestAmerica Canton | Job No.: 240-22303-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	66200		50000	96	75-125	0	20		6010C
Iron	1370		1000	98	75-125	1	20		6010C
Potassium	51000		50000	96	75-125	1	20		6010C
Magnesium	51900		50000	96	75-125	1	20		6010C
Manganese	519		500	96	75-125	2	20		6010C
Sodium	60200		50000	96	75-125	0	20		6010C
SiO2, Silica	10500		2140	4	75-125	13	or 20	4	6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-79873/2-A

Lab Name: TestAmerica Canton Job No.: 240-22303-1

Sample Matrix: Water LCS Source: MTICP2A_00024

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	48200		96	80	120		6010C
Iron	1000	971		97	80	120		6010C
Potassium	50000	47400		95	80	120		6010C
Magnesium	50000	47500		95	80	120		6010C
Manganese	500	485		97	80	120		6010C
Sodium	50000	47800		96	80	120		6010C
SiO2, Silica	2140	2150		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22303-8

SDG No:

Lab Name: TestAmerica Canton Job No: 240-22303-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	18000		17800	J	2.5		6010C
Iron	390		1000	U	NC		6010C
Potassium	3100	J	3260	J	NC		6010C
Magnesium	3900	J	3930	J	0.10		6010C
Manganese	37		37.4	J	2.1		6010C
Sodium	12000		12200	J	NC		6010C
SiO2, Silica	10000		10200	J	2.2		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-96231/1-A	04/04/2013 15:50	96231		50	50
LCS 440-96231/2-A	04/04/2013 15:50	96231		50	50
240-22303-2	04/04/2013 15:50	96231		50	50
240-22303-2 MS	04/04/2013 15:50	96231		50	50
240-22303-2 MSD	04/04/2013 15:50	96231		50	50
240-22303-7	04/04/2013 15:50	96231		50	50
240-22303-10	04/04/2013 15:50	96231		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96231/1-A

Instrument Code: ICPMS4 Batch No.: 96433

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	1.00	J		6020
7440-62-2	Vanadium	20	U		6020

FORM III-IN

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96231/1-A

Instrument Code: ICPMS4 Batch No.: 96469

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	1.0	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW34B-032113 MS
Lab ID: 240-22303-2 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22303-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	80.9		2.0	U	80.0	101	75-125		6020
Arsenic	75.9		5.0	U	80.0	95	75-125		6020
Beryllium	90.6		11		80.0	100	75-125		6020
Cadmium	75.9		0.39	J	80.0	94	75-125		6020
Barium	239		160		80.0	105	75-125		6020
Chromium	75.5		2.0	U	80.0	94	75-125		6020
Copper	106		30		80.0	95	75-125		6020
Nickel	216		150		80.0	88	75-125		6020
Lead	76.1		0.26	J	80.0	95	75-125		6020
Selenium	76.0		0.79	J	80.0	94	75-125		6020
Cobalt	184		110		80.0	90	75-125		6020
Silver	78.5		0.32	J	80.0	98	75-125		6020
Thallium	77.0		0.36	J	80.0	96	75-125		6020
Zinc	387		310		80.0	100	75-125		6020
Molybdenum	72.3		0.72	J	80.0	90	75-125		6020
Vanadium	76.6		0.83	J	80.0	95	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW34B-032113 MSD | Lab ID: 240-22303-2 MSD

Lab Name: TestAmerica Irvine | Job No.: 240-22303-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.9		80.0	100	75-125	1	20		6020
Arsenic	76.5		80.0	96	75-125	1	20		6020
Beryllium	91.5		80.0	101	75-125	1	20		6020
Cadmium	74.7		80.0	93	75-125	2	20		6020
Barium	238		80.0	104	75-125	1	20		6020
Chromium	75.6		80.0	95	75-125	0	20		6020
Copper	107		80.0	97	75-125	1	20		6020
Nickel	217		80.0	89	75-125	1	20		6020
Lead	77.0		80.0	96	75-125	1	20		6020
Selenium	77.6		80.0	96	75-125	2	20		6020
Cobalt	188		80.0	95	75-125	2	20		6020
Silver	78.3		80.0	97	75-125	0	20		6020
Thallium	77.8		80.0	97	75-125	1	20		6020
Zinc	384		80.0	96	75-125	1	20		6020
Molybdenum	72.1		80.0	89	75-125	0	20		6020
Vanadium	77.8		80.0	96	75-125	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW34B-032113 PDS Lab ID: 240-22303-2 PDS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.2		2.0	U					6020
Arsenic	75.6		5.0	U					6020
Beryllium	89.2		11						6020
Cadmium	73.9		0.39	J					6020
Barium	243		160						6020
Chromium	73.7		2.0	U					6020
Copper	104		30						6020
Nickel	215		150						6020
Lead	74.9		0.26	J					6020
Selenium	76.0		0.79	J					6020
Cobalt	183		110						6020
Silver	76.7		0.32	J					6020
Thallium	75.9		0.36	J					6020
Zinc	373		310						6020
Molybdenum	71.9		0.72	J					6020
Vanadium	75.5		0.83	J					6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-96231/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	79.5		99	80	120		6020
Arsenic	80.0	76.3		95	80	120		6020
Cadmium	80.0	76.6		96	80	120		6020
Barium	80.0	76.8		96	80	120		6020
Chromium	80.0	77.8		97	80	120		6020
Copper	80.0	71.5		89	80	120		6020
Nickel	80.0	71.4		89	80	120		6020
Lead	80.0	80.2		100	80	120		6020
Selenium	80.0	79.3		99	80	120		6020
Cobalt	80.0	76.4		95	80	120		6020
Silver	80.0	81.1		101	80	120		6020
Thallium	80.0	80.3		100	80	120		6020
Zinc	80.0	75.1		94	80	120		6020
Molybdenum	80.0	71.1		89	80	120		6020
Vanadium	80.0	75.4		94	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-96231/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	80.0	81.1		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 440-42596-K-1-B SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22303-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	12		12.9	J	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	25		25.7		0.79		6020
Chromium	1.1	J	10	U	NC		6020
Copper	2.6		10	U	NC		6020
Nickel	2.0	U	10	U	NC		6020
Lead	0.25	J	5.0	U	NC		6020
Selenium	3.7	J	3.26	J	NC		6020
Cobalt	1.0	U	5.0	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	7.0	J	100	U	NC		6020
Molybdenum	40		40.3	J	1.6		6020
Vanadium	18	J	16.3	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/08/2013 14:33 End Date: 04/08/2013 17:29

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-96763/6-A	1		14:33	X
IC 440-96763/7-A	1		14:35	X
IC 440-96763/8-A	1		14:37	X
IC 440-96763/9-A	1		14:40	X
IC 440-96763/10-A	1		14:42	X
IC 440-96763/11-A	1		14:45	X
ICV 440-96763/1-A	1		14:48	X
ICB 440-96763/2-A	1		14:50	X
CRA 440-96763/5-A	1		14:52	X
CCV 440-96763/3-A			15:31	
CCB 440-96763/4-A			15:34	
ZZZZZZ			15:38	
ZZZZZZ			15:40	
ZZZZZZ			15:42	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:55	
ZZZZZZ			15:57	
ZZZZZZ			16:00	
CCV 440-96763/3-A	1		16:02	X
CCB 440-96763/4-A	1		16:05	X
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
ZZZZZZ			16:17	
ZZZZZZ			16:19	
ZZZZZZ			16:22	
ZZZZZZ			16:24	
MB 440-96473/1-A	1	T	16:27	X
LCS 440-96473/2-A	1	T	16:29	X
CCV 440-96763/3-A	1		16:32	X
CCB 440-96763/4-A	1		16:34	X
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:42	
ZZZZZZ			16:44	
ZZZZZZ			16:47	
240-22161-D-3-C MS	1	T	16:49	X
240-22161-D-3-D MSD	1	T	16:52	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/08/2013 14:33 End Date: 04/08/2013 17:29

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			16:54																												
ZZZZZZ			16:57																												
ZZZZZZ			16:59																												
CCV 440-96763/3-A	1		17:01	X																											
CCB 440-96763/4-A	1		17:04	X																											
240-22303-2	1	T	17:06	X																											
240-22303-7	1	T	17:09	X																											
240-22303-10	1	T	17:11	X																											
ZZZZZZ			17:14																												
ZZZZZZ			17:16																												
ZZZZZZ			17:19																												
ZZZZZZ			17:21																												
CCV 440-96763/3-A	1		17:23	X																											
CCB 440-96763/4-A	1		17:26	X																											
CRA 440-96763/5-A	1		17:29	X																											

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICV Source: ME 1PPM HG2_00074 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00076

Analyte	ICV 440-96763/1-A 04/08/2013 14:48				CCV 440-96763/3-A 04/08/2013 16:02				CCV 440-96763/3-A 04/08/2013 16:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.42		8.00	105	4.32		4.00	108	4.42		4.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICV Source: ME 1PPM HG2_00074 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00076

Analyte	CCV 440-96763/3-A 04/08/2013 17:01				CCV 440-96763/3-A 04/08/2013 17:23							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.35		4.00	109	4.40		4.00	110				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-96763/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.127	J	64	50-150

Lab Sample ID: CRA 440-96763/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.255		128	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96763/2-A 04/08/2013 14:50		CCB 440-96763/4-A 04/08/2013 16:05		CCB 440-96763/4-A 04/08/2013 16:34		CCB 440-96763/4-A 04/08/2013 17:04	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-96763/4-A 04/08/2013 17:26							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/04/2013 09:49 End Date: 04/04/2013 18:16

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
ICIS 240-80661/1	1		09:49	X
CALSTD 240-80661/2 IC			09:53	X
CALSTD 240-80661/3 IC			09:57	X
ICV 240-80661/4	1		10:01	X
ICB 240-80661/5	1		10:05	X
CRI 240-80661/6	1		10:09	X
ZZZZZZ			10:13	
ICSA 240-80661/8	1		10:17	
ICSAB 240-80661/9	1		10:21	
CCV 240-80661/10			10:25	
CCB 240-80661/11			10:29	
ZZZZZZ			10:33	
ZZZZZZ			10:37	
ZZZZZZ			10:41	
ZZZZZZ			10:45	
ZZZZZZ			10:49	
ZZZZZZ			10:54	
CCV 240-80661/18	1		10:58	X
CCB 240-80661/19	1		11:01	X
240-22303-8	5	R	11:07	X
240-22303-8 SD	25	R	11:11	X
240-22303-8 MS	5	R	11:15	X
240-22303-8 MSD	5	R	11:18	X
CRI 240-80661/24	1		11:22	X
ZZZZZZ			11:30	
ZZZZZZ			11:35	
ZZZZZZ			11:39	
ZZZZZZ			11:43	
ZZZZZZ			11:46	
CCV 240-80661/30	1		11:54	X
CCB 240-80661/31	1		11:58	X
ZZZZZZ			12:02	
ZZZZZZ			12:06	
ZZZZZZ			12:10	
ZZZZZZ			12:15	
ZZZZZZ			12:19	
ZZZZZZ			12:23	
ZZZZZZ			12:27	
ZZZZZZ			12:31	
ZZZZZZ			12:35	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/04/2013 09:49 End Date: 04/04/2013 18:16

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
ZZZZZZ			12:39	
CCV 240-80661/42			12:42	
CCB 240-80661/43			12:46	
ZZZZZZ			12:50	
ZZZZZZ			12:54	
ZZZZZZ			12:59	
ZZZZZZ			13:02	
ZZZZZZ			13:06	
ZZZZZZ			13:10	
ZZZZZZ			13:14	
ZZZZZZ			13:18	
ZZZZZZ			13:22	
ZZZZZZ			13:26	
CCV 240-80661/54			13:30	
CCB 240-80661/55			13:34	
ZZZZZZ			13:38	
ZZZZZZ			13:42	
ZZZZZZ			13:46	
ZZZZZZ			13:51	
ZZZZZZ			13:55	
ZZZZZZ			13:59	
ZZZZZZ			14:03	
ZZZZZZ			14:07	
ZZZZZZ			14:11	
ZZZZZZ			14:15	
CCV 240-80661/66			14:19	
CCB 240-80661/67			14:23	
ZZZZZZ			14:27	
ZZZZZZ			14:31	
ZZZZZZ			14:35	
ZZZZZZ			14:39	
ZZZZZZ			14:43	
ZZZZZZ			14:47	
ZZZZZZ			14:51	
ZZZZZZ			14:55	
ZZZZZZ			14:59	
ZZZZZZ			15:03	
CCV 240-80661/78			15:07	
CCB 240-80661/79			15:11	
ZZZZZZ			15:15	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/04/2013 09:49 End Date: 04/04/2013 18:16

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
ZZZZZZ			15:19	
ZZZZZZ			15:23	
ZZZZZZ			15:27	
ZZZZZZ			15:31	
ZZZZZZ			15:43	
ZZZZZZ			15:47	
ZZZZZZ			15:51	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
CCV 240-80661/90			16:03	
CCB 240-80661/91			16:07	
ZZZZZZ			16:11	
ZZZZZZ			16:15	
ZZZZZZ			16:19	
ZZZZZZ			16:23	
ZZZZZZ			16:27	
ZZZZZZ			16:31	
ZZZZZZ			16:35	
ZZZZZZ			16:39	
ZZZZZZ			16:43	
ZZZZZZ			16:47	
CCV 240-80661/102			16:51	
CCB 240-80661/103			16:55	
CCV 240-80661/104			16:59	
CCB 240-80661/105			17:03	
ZZZZZZ			17:13	
CCV 240-80661/107			17:18	
CCB 240-80661/108			17:21	
ZZZZZZ			17:25	
ZZZZZZ			17:29	
ZZZZZZ			17:33	
ZZZZZZ			17:37	
ZZZZZZ			17:41	
ZZZZZZ			17:45	
ZZZZZZ			17:49	
CCV 240-80661/116			17:53	
CCB 240-80661/117			17:57	
ZZZZZZ			18:01	
CCV 240-80661/119			18:05	
CCB 240-80661/120			18:09	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/04/2013 09:49 End Date: 04/04/2013 18:16

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
CCV 240-80661/121			18:13	
CCB 240-80661/122			18:16	

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-80661/4 04/04/2013 10:01				CCV 240-80661/18 04/04/2013 10:58				CCV 240-80661/30 04/04/2013 11:54			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	6830		6420	106	11500		10700	107	11700		10700	109

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-80661/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1070	J	100	70-130

Lab Sample ID: CRI 240-80661/24 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1120		105	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80661/5 04/04/2013 10:05		CCB 240-80661/19 04/04/2013 11:01		CCB 240-80661/31 04/04/2013 11:58			
		Found	C	Found	C	Found	C	Found	C
SiO2, Silica	1100	1100	U	1100	U	19.6	J		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSA 240-80661/8 Instrument ID: I9

Lab File ID: I9040413A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	*500000*	*525120*	*105*
Antimony		*-1.91*	
Arsenic		*-1.05*	
Barium		*0.485*	
Beryllium		*-0.358*	
Boron		*-0.383*	
Cadmium		*0.716*	
Calcium	*500000*	*487270*	*97*
Chromium		*2.92*	
Cobalt		*-1.43*	
Copper		*-3.93*	
Iron	*200000*	*193500*	*97*
Lead		*0.245*	
Lithium		*-25.7*	
Magnesium	*500000*	*511850*	*102*
Manganese		*2.42*	
Molybdenum		*-2.27*	
Nickel		*0.797*	
Potassium		*-50.6*	
Selenium		*1.01*	
Silicon		*-10.6*	
Silver		*-0.239*	
Sodium		*76.4*	
Strontium		*4.67*	
Thallium		*-3.95*	
Tin		*4.99*	
Titanium		*-0.251*	
Vanadium		*-0.861*	
Zinc		*6.95*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSAB 240-80661/9 Instrument ID: I9

Lab File ID: I9040413A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Aluminum	*500000*	*529390*	*106*
Antimony	*1000*	*1023*	*102*
Arsenic	*1000*	*1018*	*102*
Barium	*500*	*496*	*99*
Beryllium	*500*	*498*	*100*
Boron	*500*	*511*	*102*
Cadmium	*1000*	*1029*	*103*
Calcium	*500000*	*491480*	*98*
Chromium	*500*	*483*	*97*
Cobalt	*500*	*488*	*98*
Copper	*500*	*532*	*106*
Iron	*200000*	*193740*	*97*
Lead	*1000*	*899*	*90*
Lithium	*500*	*530*	*106*
Magnesium	*500000*	*513920*	*103*
Manganese	*500*	*491*	*98*
Molybdenum	*1000*	*975*	*98*
Nickel	*1000*	*970*	*97*
Potassium	*10000*	*10720*	*107*
Selenium	*1000*	*1002*	*100*
Silicon	*10000*	*10297*	*103*
Silver	*1000*	*1113*	*111*
Sodium	*10000*	*10854*	*109*
Strontium	*1500*	*1466*	*98*
Thallium	*1000*	*924*	*92*
Tin	*500*	*518*	*104*
Titanium	*500*	*519*	*104*
Vanadium	*500*	*496*	*99*
Zinc	*1000*	*975*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ICIS 240-80191/1	1		09:47	X	X	X	X	X	X	X																							
CALSTD 240-80191/2 IC			09:51	X	X	X	X	X	X	X																							
CALSTD 240-80191/3 IC			09:55	X	X	X	X	X	X	X																							
ICV 240-80191/4	1		09:59	X	X	X	X	X	X	X																							
ICB 240-80191/5	1		10:03	X	X	X	X	X	X	X																							
CRI 240-80191/6	1		10:07							X																							
ZZZZZZ			10:11																													
ICSA 240-80191/8	1		10:15	X	X	X	X	X	X																							
ICSAB 240-80191/9	1		10:19	X	X	X	X	X	X																							
CCV 240-80191/10			10:23																													
CCB 240-80191/11			10:27																													
ZZZZZZ			10:31																													
ZZZZZZ			10:35																													
ZZZZZZ			10:39																													
ZZZZZZ			10:43																													
ZZZZZZ			10:47																													
ZZZZZZ			10:51																													
CCV 240-80191/18	1		10:55	X	X	X	X	X	X	X																							
CCB 240-80191/19	1		10:59	X	X	X	X	X	X	X																							
ZZZZZZ			12:12																													
ZZZZZZ			12:16																													
ZZZZZZ			12:20																													
CRI 240-80191/23	1		12:26	X	X	X	X	X	X																							
MB 240-79873/1-A	1	R	12:30	X	X	X	X	X	X	X																							
LCS 240-79873/2-A	1	R	12:34	X	X	X	X	X	X	X																							
240-22303-8 SD	5	R	12:38	X	X	X	X	X	X																							
240-22303-8 MS	1	R	12:42	X	X	X	X	X	X																							
240-22303-8 MSD	1	R	12:46	X	X	X	X	X	X																							
240-22303-2	1	R	12:49	X	X	X	X	X	X	X																							
CCV 240-80191/30	1		12:55	X	X	X	X	X	X	X																							
CCB 240-80191/31	1		12:59	X	X	X	X	X	X	X																							
EMPTY 240-80191/32			13:03																													
240-22303-8	1	R	13:07	X	X	X	X	X	X																							
ZZZZZZ			13:11																													
ZZZZZZ			13:15																													
ZZZZZZ			13:19																													
ZZZZZZ			13:36																													
EMPTY 240-80191/38			13:40																													
ZZZZZZ			14:05																													
ZZZZZZ			14:09																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			16:53																													
ZZZZZZ			16:57																													
ZZZZZZ			17:02																													
ZZZZZZ			17:06																													
ZZZZZZ			17:10																													
ZZZZZZ			17:14																													
ZZZZZZ			17:18																													
ZZZZZZ			17:22																													
ZZZZZZ			17:27																													
CCV 240-80191/90			17:31																													
CCB 240-80191/91			17:35																													
ZZZZZZ			17:39																													
ZZZZZZ			17:43																													
ZZZZZZ			17:48																													
ZZZZZZ			17:52																													
ZZZZZZ			17:56																													
ZZZZZZ			18:00																													
ZZZZZZ			18:04																													
ZZZZZZ			18:08																													
ZZZZZZ			18:12																													
ZZZZZZ			18:16																													
CCV 240-80191/102			18:20																													
CCB 240-80191/103			18:24																													
ZZZZZZ			18:28																													
ZZZZZZ			18:32																													
ZZZZZZ			18:36																													
ZZZZZZ			18:40																													
ZZZZZZ			18:44																													
ZZZZZZ			18:48																													
ZZZZZZ			18:52																													
ZZZZZZ			18:56																													
ZZZZZZ			19:00																													
ZZZZZZ			19:04																													
CCV 240-80191/114			19:09																													
CCB 240-80191/115			19:13																													
ZZZZZZ			19:17																													
ZZZZZZ			19:21																													
ZZZZZZ			19:25																													
ZZZZZZ			19:30																													
ZZZZZZ			19:34																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ca	Fe	K	Mg	Mn	Na	SiO2																								
ZZZZZZ			19:38																														
ZZZZZZ			19:43																														
ZZZZZZ			19:47																														
ZZZZZZ			19:51																														
ZZZZZZ			19:56																														
CCV 240-80191/126			20:00																														
CCB 240-80191/127			20:04																														
ZZZZZZ			20:08																														
ZZZZZZ			20:12																														
ZZZZZZ			20:16																														
ZZZZZZ			20:20																														
ZZZZZZ			20:24																														
ZZZZZZ			20:28																														
ZZZZZZ			20:32																														
ZZZZZZ			20:36																														
ZZZZZZ			20:40																														
ZZZZZZ			20:44																														
CCV 240-80191/138			20:48																														
CCB 240-80191/139			20:52																														
ZZZZZZ			20:56																														
ZZZZZZ			21:00																														
ZZZZZZ			21:05																														
ZZZZZZ			21:09																														
ZZZZZZ			21:13																														
ZZZZZZ			21:17																														
ZZZZZZ			21:21																														
ZZZZZZ			21:26																														
ZZZZZZ			21:30																														
CCV 240-80191/149			21:34																														
CCB 240-80191/150			21:37																														

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-80191/4 04/01/2013 09:59				CCV 240-80191/18 04/01/2013 10:55				CCV 240-80191/30 04/01/2013 12:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25600		25000	102	50400		50000	101	50500		50000	101
Iron	12900		12500	104	24800		25000	99	24600		25000	98
Magnesium	25400		25000	101	50400		50000	101	50000		50000	100
Manganese	1540		1500	103	1900		2000	95	1960		2000	98
Potassium	25100		25000	101	49600		50000	99	49800		50000	100
SiO2, Silica	6840		6420	107	11000		10700	103	11300		10700	105
Sodium	25300		25000	101	49400		50000	99	50200		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	CCV 240-80191/42 04/01/2013 14:19											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	51300		50000	103								
Iron	25100		25000	100								
Magnesium	51500		50000	103								
Manganese	1960		2000	98								
Potassium	50700		50000	101								
SiO2, Silica	11300		10700	106								
Sodium	50200		50000	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-80191/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1070	J	100	70-130

Lab Sample ID: CRI 240-80191/23 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	4980	J	100	70-130
Iron	200	201		101	70-130
Potassium	5000	4920	J	98	70-130
Magnesium	5000	5030		101	70-130
Manganese	15.0	15.2		101	70-130
Sodium	5000	5030		101	70-130

Lab Sample ID: CRI 240-80191/44 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5080		102	70-130
Iron	200	207		104	70-130
Potassium	5000	5060		101	70-130
Magnesium	5000	5230		105	70-130
Manganese	15.0	15.4		102	70-130
Sodium	5000	5060		101	70-130

Lab Sample ID: CRI 240-80191/45 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1080	J	101	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80191/5 04/01/2013 10:03		CCB 240-80191/19 04/01/2013 10:59		CCB 240-80191/31 04/01/2013 12:59		CCB 240-80191/43 04/01/2013 14:23	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U	5000	U
Iron	200	200	U	200	U	200	U	200	U
Magnesium	5000	5000	U	5000	U	5000	U	5000	U
Manganese	15	15	U	15	U	15	U	15	U
Potassium	5000	5000	U	5000	U	5000	U	5000	U
SiO2, Silica	1100	1100	U	1100	U	1100	U	1100	U
Sodium	5000	5000	U	5000	U	5000	U	5000	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSA 240-80191/8 Instrument ID: I9

Lab File ID: I9040113A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Calcium	**500000**	**471560**	**94**
Iron	**200000**	**184480**	**92**
Magnesium	**500000**	**490200**	**98**
Manganese		**2.89**	
Potassium		**141**	
Sodium		**45.3**	
Aluminum	*500000*	*495420*	*99*
Antimony		*-5.16*	
Arsenic		*-2.18*	
Barium		*0.0917*	
Beryllium		*-0.372*	
Boron		*0.734*	
Cadmium		*0.655*	
Chromium		*2.79*	
Cobalt		*-1.22*	
Copper		*-2.74*	
Lead		*4.40*	
Lithium		*-26.7*	
Molybdenum		*-2.02*	
Nickel		*1.98*	
Selenium		*5.12*	
Silicon		*-3.68*	
Silver		*-0.697*	
Strontium		*7.08*	
Thallium		*-2.82*	
Tin		*5.55*	
Titanium		*-0.563*	
Vanadium		*-1.82*	
Zinc		*10.5*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSAB 240-80191/9 Instrument ID: I9

Lab File ID: I9040113A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**478460**	**96**
Iron	**200000**	**190960**	**95**
Magnesium	**500000**	**505750**	**101**
Manganese	**500**	**492**	**98**
Potassium	**10000**	**10478**	**105**
Sodium	**10000**	**10497**	**105**
Aluminum	*500000*	*511460*	*102*
Antimony	*1000*	*1016*	*102*
Arsenic	*1000*	*1019*	*102*
Barium	*500*	*487*	*97*
Beryllium	*500*	*487*	*97*
Boron	*500*	*508*	*102*
Cadmium	*1000*	*1020*	*102*
Chromium	*500*	*481*	*96*
Cobalt	*500*	*490*	*98*
Copper	*500*	*526*	*105*
Lead	*1000*	*912*	*91*
Lithium	*500*	*505*	*101*
Molybdenum	*1000*	*975*	*97*
Nickel	*1000*	*976*	*98*
Selenium	*1000*	*996*	*100*
Silicon	*10000*	*9933*	*99*
Silver	*1000*	*1100*	*110*
Strontium	*1500*	*1463*	*98*
Thallium	*1000*	*954*	*95*
Tin	*500*	*508*	*102*
Titanium	*500*	*514*	*103*
Vanadium	*500*	*480*	*96*
Zinc	*1000*	*1002*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 08:41 End Date: 04/05/2013 12:07

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ag	As	Ba	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn														
RINSE 440-96433/1			08:41																													
STD0 440-96433/2 IC	1		08:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD1 440-96433/3 IC	1		08:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD2 440-96433/4 IC	1		08:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD3 440-96433/5 IC	1		08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD4 440-96433/6 IC	1		08:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICV 440-96433/7	1		08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICB 440-96433/8	1		09:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-96433/9	1		09:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-96433/10	1		09:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
RINSE 440-96433/11			09:17																													
CCV 440-96433/12	1		10:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-96433/13	1		10:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSA 440-96433/14	1		10:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSAB 440-96433/15	1		10:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			10:44																													
MB 440-96231/1-A	1	R	10:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
LCS 440-96231/2-A	1	R	10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22303-2	1	R	10:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22303-2 MS	1	R	10:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22303-2 MSD	1	R	10:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22303-2 PDS	1	R	11:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22303-7	1	R	11:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCV 440-96433/24	1		11:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			11:08																													
CCB 440-96433/26	1		11:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-22303-10	1	R	11:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			11:16																													
ZZZZZZ			11:19																													
ZZZZZZ			11:21																													
ZZZZZZ			11:24																													
ZZZZZZ			11:27																													
ZZZZZZ			11:29																													
ZZZZZZ			11:32																													
ZZZZZZ			11:35																													
ZZZZZZ			11:37																													
CCV 440-96433/37	1		11:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			11:43																													
CCB 440-96433/39	1		11:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			11:49																													
ZZZZZZ			11:51																													
ZZZZZZ			11:54																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 08:41 End Date: 04/05/2013 12:07

Lab Sample Id	D/F	Type	Time	Analytes																											
				Ag	As	Ba	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn														
ZZZZZZ			11:57																												
ZZZZZZ			11:59																												
440-42596-K-1-B SD ^5	5	R	12:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCV 440-96433/46	1		12:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-96433/47	1		12:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-96433/7 04/05/2013 08:57				CCV 440-96433/12 04/05/2013 10:33				CCV 440-96433/24 04/05/2013 11:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.9		25.0	91	51.1		50.0	102	52.4		50.0	105
Arsenic	23.7		25.0	95	49.0		50.0	98	49.8		50.0	100
Barium	23.7		25.0	95	50.5		50.0	101	50.7		50.0	101
Cadmium	23.7		25.0	95	48.9		50.0	98	49.8		50.0	100
Chromium	24.3		25.0	97	51.6		50.0	103	51.0		50.0	102
Cobalt	24.4		25.0	97	50.9		50.0	102	49.6		50.0	99
Copper	22.5		25.0	90	47.4		50.0	95	46.2		50.0	92
Lead	23.3		25.0	93	52.4		50.0	105	52.6		50.0	105
Molybdenum	22.9		25.0	91	45.9		50.0	92	46.9		50.0	94
Nickel	22.7		25.0	91	47.4		50.0	95	46.2		50.0	92
Selenium	24.3		25.0	97	49.6		50.0	99	50.4		50.0	101
Silver	23.0		25.0	92	49.3		50.0	99	50.9		50.0	102
Thallium	22.5		25.0	90	53.1		50.0	106	53.6		50.0	107
Vanadium	24.5		25.0	98	51.3		50.0	103	51.0		50.0	102
Zinc	22.5		25.0	90	50.6		50.0	101	51.2		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	CCV 440-96433/37 04/05/2013 11:40				CCV 440-96433/46 04/05/2013 12:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.0		50.0	104	51.7		50.0	103				
Arsenic	49.4		50.0	99	49.5		50.0	99				
Barium	50.7		50.0	101	50.3		50.0	101				
Cadmium	49.3		50.0	99	49.1		50.0	98				
Chromium	51.3		50.0	103	50.7		50.0	101				
Cobalt	50.4		50.0	101	49.7		50.0	99				
Copper	46.6		50.0	93	46.5		50.0	93				
Lead	52.6		50.0	105	52.6		50.0	105				
Molybdenum	46.5		50.0	93	45.8		50.0	92				
Nickel	47.0		50.0	94	46.5		50.0	93				
Selenium	50.5		50.0	101	50.9		50.0	102				
Silver	50.5		50.0	101	50.2		50.0	100				
Thallium	53.1		50.0	106	53.5		50.0	107				
Vanadium	51.4		50.0	103	51.3		50.0	103				
Zinc	50.7		50.0	101	51.1		50.0	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96433/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.925	J	93	50-150
Arsenic	1.00	1.04		104	50-150
Cadmium	0.500	0.504	J	101	50-150
Barium	1.00	1.01		101	50-150
Chromium	1.00	0.962	J	96	50-150
Copper	1.00	0.889	J	89	50-150
Nickel	1.00	0.765	J	77	50-150
Lead	1.00	0.963	J	96	50-150
Selenium	1.00	0.877	J	88	50-150
Cobalt	0.500	0.459	J	92	50-150
Silver	1.00	0.855	J	86	50-150
Thallium	1.00	0.910	J	91	50-150
Zinc	5.00	5.02	J	100	50-150
Molybdenum	1.00	0.944	J	94	50-150
Vanadium	2.00	1.91	J	96	50-150

Lab Sample ID: CRI 440-96433/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.93	J	96	50-150
Arsenic	2.00	1.95		97	50-150
Cadmium	1.00	1.02		102	50-150
Barium	2.00	2.07		104	50-150
Chromium	2.00	2.00		100	50-150
Copper	2.00	1.80	J	90	50-150
Nickel	2.00	1.82	J	91	50-150
Lead	2.00	1.97		99	50-150
Selenium	2.00	1.88	J	94	50-150
Cobalt	1.00	0.982	J	98	50-150
Silver	2.00	1.92		96	50-150
Thallium	2.00	1.88		94	50-150
Zinc	10.0	10.5	J	105	50-150
Molybdenum	2.00	1.95	J	98	50-150
Vanadium	4.00	3.90		98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96433/8 04/05/2013 09:05		CCB 440-96433/13 04/05/2013 10:36		CCB 440-96433/26 04/05/2013 11:11		CCB 440-96433/39 04/05/2013 11:46	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.229	J	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.245	J	1.0	U	1.0	U
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-96433/47 04/05/2013 12:07							
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U						
Arsenic	1.0	1.0	U						
Barium	1.0	1.0	U						
Cadmium	1.0	1.0	U						
Chromium	2.0	2.0	U						
Cobalt	1.0	1.0	U						
Copper	2.0	2.0	U						
Lead	1.0	1.0	U						
Molybdenum	2.0	0.255	J						
Nickel	2.0	2.0	U						
Selenium	2.0	2.0	U						
Silver	1.0	0.244	J						
Thallium	1.0	1.0	U						
Vanadium	2.0	2.0	U						
Zinc	20	20	U						

Italicized analytes were not requested for this sequence.

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/05/2013 End Date: 04/05/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-96433/2 IC	08:43	100		100		100		100		100	
STD1 440-96433/3 IC	08:46	99		98		99		98		101	
STD2 440-96433/4 IC	08:49	100		99		98		98		99	
STD3 440-96433/5 IC	08:52	99		100		100		100		100	
STD4 440-96433/6 IC	08:54	102		100		98		97		101	
ICV 440-96433/7	08:57	106		100		99		100		102	
ICB 440-96433/8	09:05	102		99		98		98		101	
CRI 440-96433/9	09:11	104		100		99		99		102	
CRI 440-96433/10	09:14	102		99		99		98		102	
CCV 440-96433/12	10:33	117		96		96		100		107	
CCB 440-96433/13	10:36	117		96		96		100		105	
ICSA 440-96433/14	10:39	90		92		90		90		100	
ICSAB 440-96433/15	10:41	87		90		89		87		98	
MB 440-96231/1-A	10:47	110		96		94		99		106	
LCS 440-96231/2-A	10:50	109		95		94		99		106	
240-22303-2	10:52	109		99		95		97		106	
240-22303-2 MS	10:55	109		99		95		95		105	
240-22303-2 MSD	10:58	112		96		94		96		104	
240-22303-2 PDS	11:00	111		99		95		96		105	
240-22303-7	11:03	106		99		93		91		102	
CCV 440-96433/24	11:05			100		97		99		105	
CCB 440-96433/26	11:11	120		98		96		99		104	
240-22303-10	11:13	95		99		91		87		105	
CCV 440-96433/37	11:40	113		99		98		101		106	
CCB 440-96433/39	11:46	114		100		97		102		106	
440-42596-K-1-B SD	12:02	110		99		96		98		105	
CCV 440-96433/46	12:05	110		96		95		100		107	
CCB 440-96433/47	12:07	115		95		95		100		107	

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSA 440-96433/14 Instrument ID: ICPMS4

Lab File ID: 041ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True	Found	
	Solution A	Solution A	Percent Recovery
Antimony		**0.273**	
Arsenic		**0.144**	
Barium		**0.224**	
Cadmium		**0.0840**	
Chromium		**1.42**	
Cobalt		**0.0510**	
Copper		**0.572**	
Lead		**0.106**	
Molybdenum	**2000**	**2134**	**107**
Nickel		**0.564**	
Selenium		**-0.120**	
Silver		**0.0600**	
Thallium		**-0.0030**	
Vanadium		**0.0720**	
Zinc		**14.7**	
Aluminum	*100000*	*96858*	*97*
Calcium	*100000*	*101659*	*102*
Cerium		*0.0190*	
Iron	*100000*	*0.0000*	*0*
Magnesium	*100000*	*102062*	*102*
Manganese		*0.242*	
Potassium	*100000*	*101597*	*102*
Sodium	*100000*	*105450*	*105*
Sr		*4.75*	
Tin		*0.198*	
Uranium		*0.0190*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSAB 440-96433/15 Instrument ID: ICPMS4

Lab File ID: 042ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**20.0**	**21.3**	**107**
Arsenic	**20.0**	**20.8**	**104**
Barium	**20.0**	**22.4**	**112**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.5**	**102**
Cobalt	**20.0**	**19.6**	**98**
Copper	**20.0**	**18.6**	**93**
Lead	**20.0**	**20.0**	**100**
Molybdenum	**2020**	**2117**	**105**
Nickel	**20.0**	**19.8**	**99**
Selenium	**20.0**	**20.9**	**105**
Silver	**20.0**	**19.7**	**99**
Thallium	**20.0**	**19.1**	**95**
Vanadium	**20.0**	**21.1**	**106**
Zinc	**20.0**	**28.9**	**144**
Aluminum	*100000*	*94215*	*94*
Calcium	*101000*	*100899*	*100*
Cerium	*20.0*	*22.4*	*112*
Iron	*100000*	*0.0000*	*0*
Magnesium	*101000*	*100468*	*100*
Manganese	*20.0*	*21.4*	*107*
Potassium	*101000*	*101002*	*100*
Sodium	*101000*	*104455*	*104*
Sr	*20.0*	*28.0*	*140*
Tin	*20.0*	*21.8*	*109*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 12:15 End Date: 04/05/2013 14:15

Lab Sample Id	D/F	Type	Time	Analytes
				Be
RINSE 440-96469/1			12:15	
STD0 440-96469/2 IC	1		12:18	X
STD1 440-96469/3 IC	1		12:20	X
STD2 440-96469/4 IC	1		12:23	X
STD3 440-96469/5 IC	1		12:26	X
STD4 440-96469/6 IC	1		12:29	X
ZZZZZZ			12:31	
ICV 440-96469/8	1		12:34	X
ICB 440-96469/9	1		12:36	X
CRI 440-96469/10	1		12:39	X
CRI 440-96469/11	1		12:42	X
ICSA 440-96469/12	1		12:44	X
ICSAB 440-96469/13	1		12:47	X
RINSE 440-96469/14			12:58	
MB 440-96231/1-A	1	R	13:01	X
LCS 440-96231/2-A	1	R	13:04	X
240-22303-2	1	R	13:06	X
240-22303-2 MS	1	R	13:09	X
240-22303-2 MSD	1	R	13:12	X
240-22303-2 PDS	1	R	13:14	X
240-22303-7	1	R	13:17	X
240-22303-10	1	R	13:19	X
ZZZZZZ			13:22	
CCV 440-96469/24	1		13:24	X
CCB 440-96469/25	1		13:27	X
ZZZZZZ			13:30	
ZZZZZZ			13:32	
ZZZZZZ			13:35	
ZZZZZZ			13:38	
ZZZZZZ			13:40	
ZZZZZZ			13:43	
ZZZZZZ			13:46	
CCV 440-96469/33	1		13:48	X
CCB 440-96469/34	1		13:51	X
ZZZZZZ			13:54	
ZZZZZZ			13:57	
ZZZZZZ			13:59	
ZZZZZZ			14:02	
ZZZZZZ			14:05	
ZZZZZZ			14:07	
440-42596-K-1-B SD ^5	5	R	14:10	X
CCV 440-96469/42	1		14:13	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 12:15 End Date: 04/05/2013 14:15

Lab Sample Id	D/F	Type	Time	Analytes
				Be
CCB 440-96469/43	1		14:15	X

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-96469/8 04/05/2013 12:34				CCV 440-96469/24 04/05/2013 13:24				CCV 440-96469/33 04/05/2013 13:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	23.6		25.0	94	51.1		50.0	102	50.9		50.0	102
Antimony	23.1		25.0	92	52.8		50.0	106	51.6		50.0	103
Arsenic	24.3		25.0	97	50.5		50.0	101	50.0		50.0	100
Barium	24.9		25.0	100	51.6		50.0	103	50.5		50.0	101
Cadmium	24.5		25.0	98	51.3		50.0	103	50.2		50.0	100
Chromium	25.5		25.0	102	52.7		50.0	105	50.9		50.0	102
Cobalt	25.5		25.0	102	52.0		50.0	104	51.1		50.0	102
Copper	22.7		25.0	91	47.0		50.0	94	45.7		50.0	91
Molybdenum	22.9		25.0	92	47.9		50.0	96	47.1		50.0	94
Nickel	24.4		25.0	97	50.8		50.0	102	49.4		50.0	99
Selenium	24.3		25.0	97	49.9		50.0	100	49.8		50.0	100
Silver	23.4		25.0	93	52.5		50.0	105	51.4		50.0	103
Vanadium	25.8		25.0	103	51.8		50.0	104	51.1		50.0	102
Zinc	23.0		25.0	92	51.9		50.0	104	51.2		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	CCV 440-96469/42 04/05/2013 14:13											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	50.3		50.0	101								
Antimony	52.7		50.0	105								
Arsenic	50.2		50.0	100								
Barium	51.8		50.0	104								
Cadmium	50.5		50.0	101								
Chromium	51.7		50.0	103								
Cobalt	51.3		50.0	103								
Copper	46.7		50.0	93								
Molybdenum	47.3		50.0	95								
Nickel	50.4		50.0	101								
Selenium	49.9		50.0	100								
Silver	52.7		50.0	105								
Vanadium	51.5		50.0	103								
Zinc	51.5		50.0	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96469/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.925	J	93	50-150
Arsenic	1.00	0.960	J	96	50-150
Beryllium	0.500	0.478	J	96	50-150
Cadmium	0.500	0.501	J	100	50-150
Barium	1.00	0.988	J	99	50-150
Chromium	1.00	0.949	J	95	50-150
Copper	1.00	0.953	J	95	50-150
Nickel	1.00	0.913	J	91	50-150
Lead	1.00	0.927	J	93	50-150
Selenium	1.00	1.05	J	105	50-150
Cobalt	0.500	0.459	J	92	50-150
Silver	1.00	0.906	J	91	50-150
Thallium	1.00	0.906	J	91	50-150
Zinc	5.00	5.13	J	103	50-150
Molybdenum	1.00	0.918	J	92	50-150
Vanadium	2.00	1.92	J	96	50-150

Lab Sample ID: CRI 440-96469/11 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.88	J	94	50-150
Arsenic	2.00	2.06		103	50-150
Beryllium	1.00	0.963		96	50-150
Cadmium	1.00	1.01		101	50-150
Barium	2.00	2.07		103	50-150
Chromium	2.00	1.94	J	97	50-150
Copper	2.00	1.80	J	90	50-150
Nickel	2.00	1.95	J	97	50-150
Lead	2.00	1.88		94	50-150
Selenium	2.00	2.02		101	50-150
Cobalt	1.00	0.945	J	95	50-150
Silver	2.00	1.85		93	50-150
Thallium	2.00	1.83		92	50-150
Zinc	10.0	10.6	J	106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96469/11 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	1.90	J	95	50-150
Vanadium	4.00	3.76		94	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96469/9 04/05/2013 12:36		CCB 440-96469/25 04/05/2013 13:27		CCB 440-96469/34 04/05/2013 13:51		CCB 440-96469/43 04/05/2013 14:15	
		Found	C	Found	C	Found	C	Found	C
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	0.116	J	0.134	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Molybdenum	2.0	2.0	U	0.344	J	0.252	J	0.279	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.255	J	0.312	J	0.272	J	0.265	J
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/05/2013 End Date: 04/05/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-96469/2 IC	12:18	100		100		100		100		100	
STD1 440-96469/3 IC	12:20	102		99		99		99		100	
STD2 440-96469/4 IC	12:23	102		100		100		99		99	
STD3 440-96469/5 IC	12:26	102		99		99		99		101	
STD4 440-96469/6 IC	12:29	97		98		98		100		99	
ICV 440-96469/8	12:34	98		98		99		98		100	
ICB 440-96469/9	12:36	99		98		99		99		100	
CRI 440-96469/10	12:39	98		98		99		100		99	
CRI 440-96469/11	12:42	101		98		99		100		99	
ICSA 440-96469/12	12:44	77		95		94		90		95	
ICSAB 440-96469/13	12:47	76		94		94		90		94	
MB 440-96231/1-A	13:01	84		95		97		99		100	
LCS 440-96231/2-A	13:04	82		94		97		98		100	
240-22303-2	13:06	81		97		96		97		99	
240-22303-2 MS	13:09	82		99		98		98		100	
240-22303-2 MSD	13:12	81		98		96		96		99	
240-22303-2 PDS	13:14	82		97		96		96		99	
240-22303-7	13:17	78		99		95		91		94	
240-22303-10	13:19	75		100		94		87		99	
CCV 440-96469/24	13:24	90		99		99		100		100	
CCB 440-96469/25	13:27	93		100		99		100		100	
CCV 440-96469/33	13:48	91		105		103		102		100	
CCB 440-96469/34	13:51	97		101		102		101		100	
440-42596-K-1-B SD	14:10	93		102		100		99		99	
CCV 440-96469/42	14:13	92		98		98		99		101	
CCB 440-96469/43	14:15	95		99		99		101		101	

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSA 440-96469/12 Instrument ID: ICPMS4

Lab File ID: 012ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0100**	
Aluminum	*100000*	*93410*	*93*
Antimony		*0.270*	
Arsenic		*0.209*	
Barium		*0.207*	
Cadmium		*0.0600*	
Calcium	*100000*	*100228*	*100*
Cerium		*0.0190*	
Chromium		*1.36*	
Cobalt		*0.0460*	
Copper		*0.629*	
Iron	*100000*	*0.0000*	*0*
Lead		*0.0910*	
Magnesium	*100000*	*96239*	*96*
Manganese		*0.169*	
Molybdenum	*2000*	*2167*	*108*
Nickel		*0.703*	
Potassium	*100000*	*100572*	*101*
Selenium		*-0.102*	
Silver		*0.107*	
Sodium	*100000*	*105159*	*105*
Sr		*4.74*	
Thallium		*-0.0060*	
Tin		*0.132*	
Uranium		*0.0030*	
Vanadium		*0.115*	
Zinc		*14.7*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22303-1

SDG No.:

Lab Sample ID: ICSAB 440-96469/13 Instrument ID: ICPMS4

Lab File ID: 013ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**20.0**	**22.2**	**111**
Aluminum	*100000*	*90602*	*91*
Antimony	*20.0*	*20.5*	*103*
Arsenic	*20.0*	*20.8*	*104*
Barium	*20.0*	*22.2*	*111*
Cadmium	*20.0*	*20.6*	*103*
Calcium	*101000*	*99604*	*99*
Cerium	*20.0*	*22.3*	*112*
Chromium	*20.0*	*20.5*	*103*
Cobalt	*20.0*	*18.9*	*94*
Copper	*20.0*	*18.6*	*93*
Iron	*100000*	*0.0000*	*0*
Lead	*20.0*	*17.9*	*89*
Magnesium	*101000*	*96373*	*96*
Manganese	*20.0*	*21.0*	*105*
Molybdenum	*2020*	*2145*	*106*
Nickel	*20.0*	*21.2*	*106*
Potassium	*101000*	*100183*	*100*
Selenium	*20.0*	*20.0*	*100*
Silver	*20.0*	*19.5*	*98*
Sodium	*101000*	*103556*	*103*
Sr	*20.0*	*27.5*	*137*
Thallium	*20.0*	*17.7*	*88*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*18.9*	*94*
Vanadium	*20.0*	*21.5*	*107*
Zinc	*20.0*	*28.8*	*144*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: VERONICA

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22303-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID:	79600	Date: 03/27/2013 09:08					
160.1	MB 240-79600/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID:	79203	Date: 03/22/2013 16:27					
300.0	MB 240-79203/3	Chloride	0.153	J	mg/L	1.0	1
300.0	MB 240-79203/3	Sulfate	1.0	U	mg/L	1.0	1
Batch ID:	79204	Date: 03/22/2013 16:27					
300.0	MB 240-79204/3	Nitrite as N	0.10	U ^	mg/L	0.10	1
300.0	MB 240-79204/3	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79204/3	Orthophosphate as P	0.50	U ^	mg/L	0.50	1
Batch ID:	80251	Date: 04/01/2013 17:52					
310.1	MB 240-80251/34	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID:	80119	Date: 04/01/2013 07:54					
350.3	MB 240-80119/7	Ammonia (as N)	0.0399	J	mg/L	0.20	1
Batch ID:	80877	Date: 04/06/2013 11:54					
9060	MB 240-80877/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79203	Date: 03/22/2013 17:28										
300.0	240-22303-2	Sulfate	18		mg/L						
300.0	240-22303-2 MS	Sulfate	68.0		mg/L	50.0	99	80-120			
Batch ID: 79204	Date: 03/22/2013 17:28										
300.0	240-22303-2	Nitrite as N	0.10	U	mg/L						^
300.0	240-22303-2 MS	Nitrite as N	3.00		mg/L	2.50	120	80-120			^
300.0	240-22303-2	Nitrate as N	0.37		mg/L						
300.0	240-22303-2 MS	Nitrate as N	2.73		mg/L	2.50	94	80-120			
300.0	240-22303-2	Orthophosphate as P	0.50	U	mg/L						^
300.0	240-22303-2 MS	Orthophosphate as P	2.04		mg/L	2.50	82	80-120			^
Batch ID: 80251	Date: 04/01/2013 19:36										
310.1	240-22303-2	Alkalinity	3.5	J	mg/L						
310.1	240-22303-2 MS	Alkalinity	499		mg/L	500	99	10-160			
Batch ID: 80119	Date: 04/01/2013 09:44										
350.3	240-22180-A-7	Ammonia (as N)	0.14	J	mg/L						B
350.3	240-22180-A-7 MS	Ammonia (as N)	2.87		mg/L	2.50	109	75-125			
Batch ID: 80877	Date: 04/06/2013 12:57										
9060	240-22303-8	Dissolved Organic Carbon	3.8		mg/L						
9060	240-22303-8 MS	Dissolved Organic Carbon	30.7		mg/L	25.0	108	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80251		Date: 04/01/2013 19:52									
310.1	240-22303-2 MSD	Alkalinity	501		mg/L	500	100	10-160	1	24	
Batch ID: 80119		Date: 04/01/2013 09:46									
350.3	240-22180-A-7 MSD	Ammonia (as N)	2.85		mg/L	2.50	108	75-125	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 79600	Date: 03/27/2013 09:08							
160.1		240-22291-J-1	Total Dissolved Solids	6200	mg/L			
160.1		240-22291-J-1 DU	Total Dissolved Solids	6340	mg/L	2	20	
Batch ID: 80251	Date: 04/01/2013 19:22							
310.1	MRC-MW34B-032113	240-22303-2	Alkalinity	3.5	mg/L			J
310.1	MRC-MW34B-032113	240-22303-2 DU	Alkalinity	3.62	mg/L	3	20	J

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79600		Date: 03/27/2013 09:08									
						LCS Source: WCWIBBYSOLIDS_00002					
160.1	LCS 240-79600/2	Total Dissolved Solids	196		mg/L	206	95	88-110			
Batch ID: 79203		Date: 03/22/2013 16:48									
						LCS Source: WCICLCS_00170					
300.0	LCS 240-79203/4	Chloride	52.8		mg/L	50.0	106	90-110			
300.0	LCS 240-79203/4	Sulfate	51.9		mg/L	50.0	104	90-110			
Batch ID: 79204		Date: 03/22/2013 16:48									
						LCS Source: WCICLCS_00170					
300.0	LCS 240-79204/4	Nitrite as N	2.73		mg/L	2.50	109	90-110			^
300.0	LCS 240-79204/4	Nitrate as N	2.55		mg/L	2.50	102	90-110			
300.0	LCS 240-79204/4	Orthophosphate as P	2.63		mg/L	2.50	105	90-110			^
Batch ID: 80251		Date: 04/01/2013 17:46									
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-80251/33	Alkalinity	82.6		mg/L	79.5	104	90-127			
Batch ID: 80119		Date: 04/01/2013 07:54									
						LCS Source: WCSIMP192-505_00001					
350.3	LCS 240-80119/8	Ammonia (as N)	9.04		mg/L	8.93	101	85-114			
Batch ID: 80877		Date: 04/06/2013 12:05									
						LCS Source: WC LCS_00006					
9060	LCS 240-80877/4	Dissolved Organic Carbon	25.8		mg/L	24.1	107	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/01/2013 11:37 End Date: 04/01/2013 22:14

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			11:37	
RINSE 240-80251/2			11:46	
ZZZZZZ			11:59	
ZZZZZZ			12:07	
ZZZZZZ			12:13	
ZZZZZZ			12:17	
ZZZZZZ			12:37	
ZZZZZZ			12:45	
ZZZZZZ			13:02	
ZZZZZZ			13:18	
ZZZZZZ			13:27	
ZZZZZZ			13:32	
ZZZZZZ			13:36	
ZZZZZZ			13:43	
ZZZZZZ			13:49	
ZZZZZZ			13:56	
ZZZZZZ			14:00	
ZZZZZZ			14:07	
ZZZZZZ			14:31	
ZZZZZZ			14:53	
ZZZZZZ			15:07	
ZZZZZZ			15:19	
ZZZZZZ			15:26	
ZZZZZZ			15:32	
ZZZZZZ			15:47	
ZZZZZZ			16:04	
ZZZZZZ			16:16	
ZZZZZZ			16:19	
ZZZZZZ			17:10	
ZZZZZZ			17:19	
ZZZZZZ			17:26	
ZZZZZZ			17:37	
LCS 240-80251/33	1	T	17:46	X
MB 240-80251/34	1	T	17:52	X
ZZZZZZ			18:43	
ZZZZZZ			18:54	
ZZZZZZ			19:07	
240-22303-2	1	T	19:13	X
ZZZZZZ			19:16	
240-22303-2 DU	1	T	19:22	X
240-22303-2 MS	1	T	19:36	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/01/2013 11:37 End Date: 04/01/2013 22:14

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
240-22303-2 MSD	1	T	19:52	X
240-22303-8	1	T	19:59	X
ZZZZZZ			20:10	
ZZZZZZ			20:27	
ZZZZZZ			20:34	
ZZZZZZ			20:42	
ZZZZZZ			20:51	
ZZZZZZ			20:59	
ZZZZZZ			21:03	
ZZZZZZ			21:12	
ZZZZZZ			21:21	
ZZZZZZ			21:30	
ZZZZZZ			21:37	
ZZZZZZ			21:41	
ZZZZZZ			21:48	
ZZZZZZ			21:54	
ZZZZZZ			22:02	
ZZZZZZ			22:11	
ZZZZZZ			22:14	

Prep Types:
T = Total/NA

FORM XIII-IN

Report Date: 4/2/2013 : 11:45 AM

Instrument ID: Steve

TestAmerica

310.1, 2320B, 305.1, 2310B, 340.2, 4500F-C

80251

Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
rinse-1	4/1/2013	11:37 AM	-1.00	8.76	11.06	49.96	27.84	22.12	.00	-1.00	-1.00
rinse-2	4/1/2013	11:46 AM	-1.00	8.91	4.76	44.77	35.24	9.53	.00	-1.00	-1.00
PH 7	4/1/2013	11:59 AM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
LCS 755049 39.8	4/1/2013	12:07 PM	-1.00	7.62	.00	42.88	42.88	.00	.00	-1.00	-1.00
MB	4/1/2013	12:13 PM	-1.00	6.19	.00	1.05	1.05	.00	.00	-1.00	-1.00
PH 7A	4/1/2013	12:17 PM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
190-319-b-1	4/1/2013	12:37 PM	-1.00	7.71	.00	81.08	81.08	.00	.00	-1.00	-1.00
DU 190-319-b-1	4/1/2013	12:45 PM	-1.00	7.72	.00	79.64	79.64	.00	.00	-1.00	-1.00
MS 190-319-b-1	4/1/2013	1:02 PM	-1.00	10.43	239.80	572.28	92.68	479.61	.00	-1.00	-1.00
MSD	4/1/2013	1:18 PM	-1.00	10.48	248.69	582.29	84.91	497.38	.00	-1.00	-1.00
190-319-b-2	4/1/2013	1:27 PM	-1.00	8.03	.00	86.97	86.97	.00	.00	-1.00	-1.00
190-319-b-3	4/1/2013	1:32 PM	-1.00	4.62	.00	-3.98	-3.98	.00	.00	-1.00	-1.00
190-319-b-4	4/1/2013	1:36 PM	-1.00	4.32	.00	-4.06	-4.06	.00	.00	-1.00	-1.00
190-319-b-5	4/1/2013	1:43 PM	-1.00	5.17	.00	62.47	62.47	.00	.00	-1.00	-1.00
190-319-b-6	4/1/2013	1:49 PM	-1.00	5.19	.00	77.94	77.94	.00	.00	-1.00	-1.00
190-319-b-7	4/1/2013	1:56 PM	-1.00	6.63	.00	74.36	74.36	.00	.00	-1.00	-1.00
PH 7-2	4/1/2013	2:00 PM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
190-319-b-8	4/1/2013	2:07 PM	-1.00	7.04	.00	83.83	83.83	.00	.00	-1.00	-1.00
240-22222-j-3@5	4/1/2013	2:31 PM	-1.00	7.92	.00	990.65	990.65	.00	.00	-1.00	-1.00
240-22258-j-1	4/1/2013	2:53 PM	-1.00	7.35	.00	284.52	284.52	.00	.00	-1.00	-1.00
240-22258-j-2	4/1/2013	3:07 PM	-1.00	7.03	.00	423.97	423.97	.00	.00	-1.00	-1.00
DU	4/1/2013	3:19 PM	-1.00	7.04	.00	413.52	413.52	.00	.00	-1.00	-1.00

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Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BICarbonate	Carbonate	Hydroxide	Fluoride	Acid
240-22259-ac-1	4/1/2013	3:26 PM	-1.00	6.06	.00	72.09	72.09	.00	.00	-1.00	-1.00
240-22285-g-1	4/1/2013	3:32 PM	-1.00	6.53	.00	1.82	1.82	.00	.00	-1.00	-1.00
240-22285-g-2	4/1/2013	3:47 PM	-1.00	7.48	.00	474.29	474.29	.00	.00	-1.00	-1.00
240-22285-g-3	4/1/2013	4:04 PM	-1.00	6.91	.00	569.86	569.86	.00	.00	-1.00	-1.00
240-22285-g-4	4/1/2013	4:16 PM	-1.00	7.25	.00	411.53	411.53	.00	.00	-1.00	-1.00
PH 7-3	4/1/2013	4:19 PM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-22290-j-1	4/1/2013	5:10 PM	-1.00	7.85	.00	.00	.00	.00	.00	-1.00	-1.00
240-22291-j-1	4/1/2013	5:19 PM	-1.00	7.40	.00	190.25	190.25	.00	.00	-1.00	-1.00
240-22293-j-3	4/1/2013	5:26 PM	-1.00	7.05	.00	75.50	75.50	.00	.00	-1.00	-1.00
240-22293-j-4	4/1/2013	5:37 PM	-1.00	6.95	.00	270.31	270.31	.00	.00	-1.00	-1.00
LCS2	4/1/2013	5:46 PM	-1.00	8.10	.00	82.62	82.62	.00	.00	-1.00	-1.00
MB2	4/1/2013	5:52 PM	-1.00	7.09	.00	1.83	1.83	.00	.00	-1.00	-1.00
240-22301-k-1	4/1/2013	6:43 PM	-1.00	7.09	.00	.00	.00	.00	.00	-1.00	-1.00
240-22301-k-2	4/1/2013	6:54 PM	-1.00	7.41	.00	362.18	362.18	.00	.00	-1.00	-1.00
240-22301-k-3	4/1/2013	7:07 PM	-1.00	7.48	.00	375.11	375.11	.00	.00	-1.00	-1.00
240-22303-k-2	4/1/2013	7:13 PM	-1.00	5.43	.00	3.53	3.53	.00	.00	-1.00	-1.00
PH 7-4	4/1/2013	7:16 PM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
DU	4/1/2013	7:22 PM	-1.00	5.39	.00	3.62	3.62	.00	.00	-1.00	-1.00
MS	4/1/2013	7:36 PM	-1.00	10.06	165.40	498.82	168.01	330.81	.00	-1.00	-1.00
MSD	4/1/2013	7:52 PM	-1.00	10.09	167.87	501.49	165.74	335.74	.00	-1.00	-1.00
240-22303-j-8	4/1/2013	7:59 PM	-1.00	6.76	.00	42.18	42.18	.00	.00	-1.00	-1.00
240-22337-g-1	4/1/2013	8:10 PM	-1.00	7.89	.00	287.70	287.70	.00	.00	-1.00	-1.00
240-22347-c-1	4/1/2013	8:27 PM	-1.00	6.95	.00	610.19	610.19	.00	.00	-1.00	-1.00
240-22347-c-4	4/1/2013	8:34 PM	-1.00	7.12	.00	30.54	30.54	.00	.00	-1.00	-1.00
240-22347-c-5	4/1/2013	8:42 PM	-1.00	7.12	.00	36.83	36.83	.00	.00	-1.00	-1.00
240-22347-d-6	4/1/2013	8:51 PM	-1.00	8.08	.00	174.03	174.03	.00	.00	-1.00	-1.00
240-22347-f-8	4/1/2013	8:59 PM	-1.00	7.88	.00	129.60	129.60	.00	.00	-1.00	-1.00
PH 7-5	4/1/2013	9:03 PM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BICarbonate	Carbonate	Hydroxide	Fluoride	Acid
DU	4/1/2013	9:12 PM	-1.00	7.81	.00	140.30	140.30	.00	.00	-1.00	-1.00
240-22347-f-9	4/1/2013	9:21 PM	-1.00	7.87	.00	176.79	176.79	.00	.00	-1.00	-1.00
240-22347-d-10	4/1/2013	9:30 PM	-1.00	7.69	.00	187.55	187.55	.00	.00	-1.00	-1.00
240-22399-z-1	4/1/2013	9:37 PM	-1.00	6.01	.00	83.77	83.77	.00	.00	-1.00	-1.00
240-22407-j-1	4/1/2013	9:41 PM	-1.00	.61	.00	.00	.00	.00	.00	-1.00	-1.00
240-22408-e-1	4/1/2013	9:48 PM	-1.00	5.85	.00	80.66	80.66	.00	.00	-1.00	-1.00
240-22409-f-1	4/1/2013	9:54 PM	-1.00	5.98	.00	52.89	52.89	.00	.00	-1.00	-1.00
240-22437-d-1	4/1/2013	10:02 PM	-1.00	6.10	.00	120.31	120.31	.00	.00	-1.00	-1.00
240-22437-d-2	4/1/2013	10:11 PM	-1.00	6.59	.00	170.44	170.44	.00	.00	-1.00	-1.00
PH 7-6	4/1/2013	10:14 PM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 300.0

Start Date: 03/08/2013 15:54 End Date: 03/08/2013 19:16

Lab Sample Id	D/F	Type	Time	Analytes																													
				Cl-	SO4																												
STD1 240-77705/1 IC	1		15:54	X	X																												
STD2 240-77705/2 IC	1		16:15	X	X																												
STD3 240-77705/3 IC	1		16:35	X	X																												
STD4 240-77705/4 IC	1		16:55	X	X																												
STD5 240-77705/5 ICRT	1		17:15	X	X																												
STD6 240-77705/6 IC	1		17:35	X	X																												
STD7 240-77705/7 IC	1		17:55	X	X																												
STD8 240-77705/8 IC	1		18:15	X	X																												
STD9 240-77705/9 IC	1		18:36	X	X																												
ICV 240-77705/10	1		18:56	X	X																												
ICB 240-77705/11			19:16																														

Prep Types:
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FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Analyst: LG Batch Start Date: 03/08/2013

Reporting Units: mg/L Analytical Batch No.: 77705

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	18:56	Chloride	53.0	50.0	106	90-110		WCICLCS_00166
			Sulfate	52.1	50.0	104	90-110		WCICLCS_00166

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 300.0

Start Date: 03/08/2013 15:54 End Date: 03/08/2013 19:16

Lab Sample Id	D/F	Type	Time	Analytes																												
				N-No2	NO3	Orthophosp																										
STD1 240-77706/1 IC	1		15:54	X	X	X																										
STD2 240-77706/2 IC	1		16:15	X	X	X																										
STD3 240-77706/3 IC	1		16:35	X	X	X																										
STD4 240-77706/4 IC	1		16:55	X	X	X																										
STD5 240-77706/5 ICRT	1		17:15	X	X	X																										
STD6 240-77706/6 IC	1		17:35	X	X	X																										
STD7 240-77706/7 IC	1		17:55	X	X	X																										
STD8 240-77706/8 IC	1		18:15	X	X	X																										
STD9 240-77706/9 IC	1		18:36	X	X	X																										
ICV 240-77706/10	1		18:56	X	X	X																										
ICB 240-77706/11			19:16																													

Prep Types:

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FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Analyst: LG Batch Start Date: 03/08/2013

Reporting Units: mg/L Analytical Batch No.: 77706

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	ICV	18:56	Nitrite as N	2.72	2.50	109	90-110		WCICLCS_00166
			Nitrate as N	2.55	2.50	102	90-110		WCICLCS_00166
			Orthophosphate as P	2.46	2.50	98	90-110		WCICLCS_00166

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 300.0

Start Date: 03/22/2013 15:47 End Date: 03/22/2013 21:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				CL-	SO4																											
CCV 240-79203/1	1		15:47	X	X																											
CCB 240-79203/2	1		16:07	X	X																											
MB 240-79203/3	1	T	16:27	X	X																											
LCS 240-79203/4	1	T	16:48	X	X																											
240-22303-2	1	T	17:08	X	X																											
240-22303-2 MS	1	T	17:28		X																											
240-22303-8	1	T	17:48	X	X																											
ZZZZZZ			18:08																													
ZZZZZZ			18:28																													
ZZZZZZ			18:48																													
ZZZZZZ			19:09																													
ZZZZZZ			19:29																													
CCV 240-79203/13	1		19:49	X	X																											
CCB 240-79203/14	1		20:09	X	X																											
ZZZZZZ			20:29																													
ZZZZZZ			20:49																													
CCV 240-79203/17			21:10																													
CCB 240-79203/18			21:30																													

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Analyst: JB Batch Start Date: 03/22/2013

Reporting Units: mg/L Analytical Batch No.: 79203

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:47	Chloride	51.7	50.0	103	90-110		WCICCCV_00251
			Sulfate	51.5	50.0	103	90-110		WCICCCV_00251
2	CCB	16:07	Chloride	0.173				J	
			Sulfate	1.0				U	
13	CCV	19:49	Chloride	53.8	50.0	108	90-110		WCICCCV_00251
			Sulfate	52.8	50.0	106	90-110		WCICCCV_00251
14	CCB	20:09	Chloride	0.152				J	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: VERONICA Analysis Method: 300.0

Start Date: 03/22/2013 15:47 End Date: 03/22/2013 21:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				N-No2	NO3	Orthophosp																										
CCV 240-79204/1	1		15:47	X	X	X																										
CCB 240-79204/2	1		16:07	X	X	X																										
MB 240-79204/3	1	T	16:27	X	X	X																										
LCS 240-79204/4	1	T	16:48	X	X	X																										
240-22303-2	1	T	17:08	X	X	X																										
240-22303-2 MS	1	T	17:28	X	X	X																										
240-22303-8	1	T	17:48	X	X	X																										
ZZZZZZ			18:08																													
ZZZZZZ			18:28																													
ZZZZZZ			18:48																													
ZZZZZZ			19:09																													
ZZZZZZ			19:29																													
CCV 240-79204/13	1		19:49	X	X	X																										
CCB 240-79204/14	1		20:09	X	X	X																										
ZZZZZZ			20:29																													
CCV 240-79204/17			21:10																													
CCB 240-79204/18			21:30																													

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Analyst: JB Batch Start Date: 03/22/2013

Reporting Units: mg/L Analytical Batch No.: 79204

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:47	Nitrite as N	2.84	2.50	113	90-110		WCICCCV_00251
			Nitrate as N	2.54	2.50	102	90-110		WCICCCV_00251
			Orthophosphate as P	2.81	2.50	112	90-110		WCICCCV_00251
2	CCB	16:07	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
13	CCV	19:49	Nitrite as N	2.78	2.50	111	90-110		WCICCCV_00251
			Nitrate as N	2.60	2.50	104	90-110		WCICCCV_00251
			Orthophosphate as P	2.44	2.50	98	90-110		WCICCCV_00251
14	CCB	20:09	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/01/2013 07:54 End Date: 04/01/2013 12:38

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
IC 240-80119/1			07:54	X
IC 240-80119/2			07:54	X
IC 240-80119/3			07:54	X
IC 240-80119/4			07:54	X
ICV 240-80119/5	10		07:54	X
ICB 240-80119/6	1		07:54	X
MB 240-80119/7	1	T	07:54	X
LCS 240-80119/8	10	T	07:54	X
ZZZZZZ			09:11	
ZZZZZZ			09:11	
ZZZZZZ			09:11	
ZZZZZZ			09:11	
ZZZZZZ			09:22	
ZZZZZZ			09:22	
240-22180-A-7 MS	1	T	09:44	X
240-22180-A-7 MSD	1	T	09:46	X
CCV 240-80119/17	1		09:47	X
CCB 240-80119/18	1		10:16	X
ZZZZZZ			10:21	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
ZZZZZZ			10:47	
240-22303-2	1	T	11:07	X
CCV 240-80119/29	1		11:07	X
CCB 240-80119/30	1		11:43	X
240-22303-8	1	T	12:37	X
ZZZZZZ			12:37	
ZZZZZZ			12:37	
ZZZZZZ			12:37	
CCV 240-80119/35	1		12:37	X
CCB 240-80119/36	1		12:38	X

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Analyst: JK Batch Start Date: 04/01/2013

Reporting Units: mg/L Analytical Batch No.: 80119

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	07:54	Ammonia (as N)	9.12	8.93	102	90-110		WCSIMP192-505_00001
6	ICB	07:54	Ammonia (as N)	0.0430				J	
17	CCV	09:47	Ammonia (as N)	2.70	2.50	108	90-110		WCNH31000_00021
18	CCB	10:16	Ammonia (as N)	0.0416				J	
29	CCV	11:07	Ammonia (as N)	2.66	2.50	106	90-110		WCNH31000_00021
30	CCB	11:43	Ammonia (as N)	0.20				U	
35	CCV	12:37	Ammonia (as N)	2.72	2.50	109	90-110		WCNH31000_00021
36	CCB	12:38	Ammonia (as N)	0.0369				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/06/2013 11:32 End Date: 04/06/2013 15:23

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-80877/1	1		11:32	X
CCB 240-80877/2	1		11:43	X
MB 240-80877/3	1	D	11:54	X
LCS 240-80877/4	1	D	12:05	X
240-22303-8	1	D	12:16	X
240-22303-8 MS	2	D	12:57	X
240-22303-2	1	D	13:08	X
ZZZZZZ			13:49	
ZZZZZZ			14:31	
CCV 240-80877/10	1		15:12	X
CCB 240-80877/11	1		15:23	X

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Analyst: TH Batch Start Date: 04/06/2013

Reporting Units: mg/L Analytical Batch No.: 80877

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:32	Dissolved Organic Carbon	26.7	25.0	107	90-110		WC TOC CCV_00127
2	CCB	11:43	Dissolved Organic Carbon	1.0				U	
10	CCV	15:12	Dissolved Organic Carbon	26.8	25.0	107	90-110		WC TOC CCV_00127
11	CCB	15:23	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22303-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 03/27/2013 09:08 End Date: 03/27/2013 09:08

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-79600/1	1	T	09:08	X
LCS 240-79600/2	1	T	09:08	X
240-22291-J-1 DU	1	T	09:08	X
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
240-22303-2	1	T	09:08	X
240-22303-8	1	T	09:08	X
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	
ZZZZZZ			09:08	

Prep Types:
T = Total/NA

FORM XIII-IN

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 21, 2013**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / SVOC (1,4-DIOXANE) / OVG / PERCHLORATE**
INORGANIC DATA VALIDATION – TOTAL & SELECT METALS / MISC INORGANIC ANALYSES
LOCKHEED MRC
SAMPLE DELIVERY GROUP (SDG) 240-22475-1

SAMPLES: 8 / Aqueous / VOC

MRC-MW-110A-032613	MRC-MW-110B-032613	MRC-MW-53A-032613
MRC-MW-53B-032613	MRC-MW29A-032613	MRC-MW37A-032613
MRC-MW72B-032613	TB-032613	

4 / Aqueous / SVOC – 1,4-Dioxane / Perchlorate

MRC-MW-110A-032613	MRC-MW-110B-032613	MRC-MW-53A-032613
MRC-MW-53B-032613		

2 / Aqueous / OVG / MISC – chloride, sulfate, nitrate-N, nitrite-N, ammonia-N, orthophosphate-P, alkalinity, TDS, dissolved organic carbon

MRC-MW37A-032613	MRC-MW72B-032613

6 / Aqueous / Total Metals

MRC-MW-110A-032613	MRC-MW-110B-032613	MRC-MW-53A-032613
MRC-MW-53B-032613	MRC-MW26A-032613	MRC-MW29A-032613

1 / Aqueous / Select Metals & Silicon Dioxide

MRC-MW72B-032613

1 / Aqueous / Total & Select Metals & Silicon Dioxide

MRC-MW37A-032613

Overview

The sample set for Lockheed MRC, SDG 240-22475-1, consisted of nine (9) aqueous samples including one (1) aqueous trip blank sample. Eight (8) aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Four (4) aqueous samples were analyzed for the semi-volatile organic compound (SVOC) 1,4-dioxane and the analyte perchlorate, as listed above. Two (2) aqueous samples were analyzed for organic volatile gases (OVG) and the miscellaneous inorganic analytes of chloride, sulfate, nitrate as Nitrogen (N), nitrite as N, ammonia as N, orthophosphate, alkalinity, total dissolved solids (TDS), and dissolved organic carbon, as listed above. Six (6) aqueous samples were analyzed for total metals as listed above. One (1) aqueous sample was analyzed for select metals and silicon dioxide as listed above. One (1) aqueous sample was analyzed for total and select metals and silicon dioxide, as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on March 26, 2013 and analyzed by TestAmerica Laboratories, Inc., North Canton, Irvine, and Sacramento for the analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260B for VOCs, 8270D for SVOCs, 6010C for metals, 6020 for metals, 7470A for mercury, 9060 for dissolved organic carbon, and EPA Method 6850 for perchlorate, method RSK-175 for OVGs, Method 300.0 for anions, Method 310.1 for alkalinity, Method 350.3 for ammonia as nitrogen, and Method 160.1 for total dissolved solids, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank/preparation results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, ICP serial dilution results, ICP interference results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for vinyl acetate and tert-butyl alcohol on instrument A3UX17 on 02/26/13. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were also less than the 0.05 criteria for instrument A3UX17 on 04/03/13 @ 12:40 and on 04/04/13 @ 11:32.

  Affected Sample: All samples

  Action: All sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR). The sample MRC-MW29A-032613 positive tert-butyl alcohol result was qualified estimated, (J).

Minor Problems

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- The following laboratory VOC contaminants were detected in the method blank and trip blank sample at the following maximum concentrations affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Acetone [1]	1.1	11.0
Methylene chloride [2]	0.396	3.960

[1] Trip blank sample TB-032613 affecting all samples.
[2] Method blank MB 240-80568 affecting sample MRC-MW72B-032613.

An action level of ten times the maximum level for methylene chloride and acetone has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the analyte action level were qualified (B) for blank contamination.

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% and less than the 50% quality control limit for chloroethane, methylene chloride, tert-butyl alcohol, methyl tert-butyl ether, vinyl acetate, 2,2-dichloropropane, 1,1,1-trichloroethane, carbon tetrachloride, and tert-amyl-methyl ether for instrument A3UX17 on 04/03/13 @ 12:40 and @ 13:02.

  Affected Samples:

MRC-MW-110A-032613	MRC-MW-110B-032613	MRC-MW-53A-032613
MRC-MW-53B-032613	MRC-MW29A-032613	MRC-MW37A-032613
TB-032613		

  Action: The sample positive tert-butyl alcohol and methyl tert-butyl ether results were qualified estimated, (J). The sample vinyl acetate and tert-butyl alcohol non-detected results were rejected for RRF criteria non-compliances and no further action was necessary. The remaining non-detected analyte sample results were not qualified.

- The VOC CCV %D was greater than the 20% and greater than the 50% quality control limit for dichlorodifluoromethane for instrument A3UX17 on 04/03/13 @ 12:40.

  Affected Samples:

MRC-MW-110A-032613	MRC-MW-110B-032613	MRC-MW-53A-032613
MRC-MW-53B-032613	MRC-MW29A-032613	MRC-MW37A-032613
TB-032613		

  Action: The non-detected dichlorodifluoromethane sample results were qualified estimated, (UJ).

- The VOC CCV %D was greater than the 20% and greater than the 50% quality control limit for dichlorodifluoromethane for instrument A3UX17 on 04/04/13 @ 11:32.

  Affected Sample: MRC-MW72B-032613

  Action: The non-detected dichlorodifluoromethane sample result was qualified estimated, (UJ).

- Samples had positive VOC tentatively identified compound (TICs) results as listed below.

Sample	TIC Analyte(s)
MRC-MW-110A-032613	tetrahydrofuran
MRC-MW-110B-032613	2-methyl butane,
MRC-MW-53A-032613	dimethyl ether
MRC-MW29A-032613	2-methyl butane, dimethyl ether
MRC-MW37A-032613	dimethyl ether

  Actions: The sample positive VOC TIC results were qualified as estimated, (NJ), presumptively present, as TIC analytes.

- The following laboratory OVG contaminant was detected in the method blank at the following maximum concentration affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Methane [1]	0.159	0.795

  [1] Method blank MB 240-79766 affecting samples MRC-MW37A-032613 and MRC-MW72B-032613.

  An action level of five times the maximum level for methane has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Sample MRC-MW37A-032613 and MRC-MW72B-032613 positive results were qualified for blank

contamination.

- The contract required detection limit (CRDL) %Rs were less than the 90% (and >50%) quality control limit for copper, nickel, selenium, and silver for CRI 440-96433/9.

  Affected Samples:

MRC-MW-110A-032613	MRC-MW-110B-032613	MRC-MW-53A-032613
MRC-MW-53B-032613	MRC-MW26A-032613	MRC-MW29A-032613
MRC-MW37A-03261		

  Actions: The non-detected copper, selenium, and silver analyte sample results were qualified biased non-detected low, (UL). The positive copper, nickel, and selenium sample analyte results <2X the CRDL arsenic and molybdenum were qualified biased detected low, (L), except for positive results qualified (J) due to a conflicting qualifier(s).

- The following metal contaminants were detected in the blank samples at the following maximum concentration:

Analyte	Maximum Conc. µg/L	Action Level µg/L
Calcium [1]	139	695
Magnesium [1]	39.8	199.0
Manganese [1]	2.06	10.30
Molybdenum [2]	1.00	5.00

  [1] Maximum concentration found in preparation blank MB 240-22475/1-A affecting samples MRC-MW37A-032613 and MRC-MW72B-032613.
  [2] Maximum concentration found in a method blank sample MB 440-96231/1-A affecting samples MRC-MW-110A-032613, MRC-MW-110B-032613, MRC-MW-53A-032613, MRC-MW-53B-032613, MRC-MW26A-032613, MRC-MW29A-032613, and MRC-MW37A-032613.

  An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Samples MRC-MW-53A-032613, MRC-MW-53B-032613, MRC-MW26A-032613, and MRC-MW29A-032613 positive molybdenum results were qualified for blank contamination.

- The following laboratory anion contaminant was detected in the CCB and the method blank at the following maximum concentration affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Chloride [1]	0.163	0.815
Ammonia as N [2]	0.0752	0.3760
Ammonia as N [3]	0.0544	0.2720

  [1] CCB 240-81024/15 affecting samples MRC-MW37A-032613 and MRC-MW72B-032613.
  [2] Method blank MB 240-80480/7 affecting samples MRC-MW37A-032613 and MRC-MW72B-032613.
  [3] CCB 240-80480/30 affecting samples MRC-MW37A-032613 and MRC-MW72B-032613. Maximum ammonia contamination detection of applicable CCBs and ICB.

An action level of five times the maximum level for the contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were

taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Both sample ammonia results were qualified for method blank contamination.

- The general chemistry chloride matrix spike (MS) %R was greater than the quality control limit for spiked sample MRC-MW72B-032613.
  Affected Samples: MRC- MW37A-032613 and MRC-MW72B-032613
  Action: Sample MRC-MW37A-032613 and MRC-MW72B-032613 positive chloride results were qualified biased high, (K).

Notes

Samples were analyzed diluted for VOCs as listed below resulting in elevated concentrations for non-detected VOC analytes.

Sample	Dilution
MRC-MW37A-032613	2.5X
MRC-MW-53B-032613	5.714X

The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% and less than the 50% quality control limit for bromomethane, chloroethane, 2,2-dichloropropane, naphthalene, 1,2,3-trichlorobenzene, and tert-amyl-methyl ether for instrument A3UX17 on 04/04/13 @ 11:32 and @ 11:54.
Affected Sample: MRC-MW72B-032613
Action: The analyte sample results were all non-detected and were not qualified.

The VOC matrix spike (MS) and MS duplicate (MSD) %Rs were non-compliant for VOC analytes for a spiked sample from another SDG (240-22543-A-1). No validation action was necessary as the spiked sample was not from this SDG.

The general chemistry orthophosphate as P matrix spike (MS) %R was greater than the quality control limit for spiked sample MRC-MW37A-032613.
Affected Samples: MRC- MW37A-032613 and MRC-MW72B-032613
Action: The samples had non-detected orthophosphate as P results and were not qualified.

The mercury analysis MS and MSD %Rs were non-compliant for a spiked sample from another SDG (240-22439-A-6-E). No validation action was necessary as the spiked sample was not from this SDG.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol and vinyl acetate sample results were rejected due to calibration and CCV RRF criteria non-compliances. Sample VOC, methane, ammonia, and molybdenum results were qualified blank contamination. Sample VOC results were qualified for CCV %D non-compliances. Sample metal analyte results were qualified for CRDL %R non-compliances.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). Sample positive VOC TIC results were qualified as presumptively present. Sample chloride results were qualified for MS and MSD %R non-compliances.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260B, 8270D, 6010C, 6020, 7470A, 9060, EPA Method 6850, RSK-175, Method 300.0, Method 310.1, Method 350.3, and Method 160.1, the Region III EPA Functional Guidelines for Organic Data Validation (9/94), and the Region III EPA Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (April 1993).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW-110A-032613			MRC-MW-110B-032613			MRC-MW29A-032613			MRC-MW37A-032613		
SDG: 240-22475-1	LAB_ID	240-22475-8			240-22475-9			240-22475-4			240-22475-3		
FRACTION: OV	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.58	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.55	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.45	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.7	U	
1,1-DICHLOROETHANE		0.6	J	P	0.15	U		5.1			0.38	U	
1,1-DICHLOROETHENE		0.69	J	P	0.2	J	P	3			0.48	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.33	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.43	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		1.1	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.015	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.38	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.3	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		1.7	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.6	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.33	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.55	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.45	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.35	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.4	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.33	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.33	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		1.4	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		2.5	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.28	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		1	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.45	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.3	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.8	U	
ACETONE		1.1	U		2.7	B	B	2.3	B	B	2.8	U	
BENZENE		1.8			3.3			0.13	U		0.33	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.33	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.73	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.38	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		1.6	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		1	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-53A-032613			MRC-MW-53B-032613			MRC-MW72B-032613			TB-032613		
SDG: 240-22475-1	LAB_ID	240-22475-6			240-22475-7			240-22475-2			240-22475-1		
FRACTION: OV	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		1.3	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		1.3	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		1	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		1.6	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.86	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		9			0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.74	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.97	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		2.5	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.034	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.86	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.69	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		3.8	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		1.4	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.74	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		1.3	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		1	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.8	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.91	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.74	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.74	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		3.3	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		5.7	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.63	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		2.3	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		1	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.69	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		1.8	U		0.32	U		0.32	U	
ACETONE		1.1	B	B	6.3	U		1.2	B	B	1.1	J	P
BENZENE		0.71	J	P	0.84	J	P	0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.74	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		1.7	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.86	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		3.7	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		2.3	U		0.41	U		0.41	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-110A-032613			MRC-MW-110B-032613			MRC-MW29A-032613			MRC-MW37A-032613		
SDG: 240-22475-1	LAB_ID	240-22475-8			240-22475-9			240-22475-4			240-22475-3		
FRACTION: OV	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BUTANE, 2-METHYL-					1.2	NJ	Z1	1.1	NJ	Z1			
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.33	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.33	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.38	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.45	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.73	U	
CHLOROFORM		0.26	J	P	0.22	J	P	0.16	U		0.4	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.75	U	
CIS-1,2-DICHLOROETHENE		9.6			4.3			3.9			1.4	J	P
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.35	U	
CYCLOHEXANE					0.12	NJ	Z1						
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.7	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	0.31	UJ	C	0.31	UJ	C	0.78	UJ	C
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		3.8	U	
DIMETHYL ETHER								2.4	NJ	Z1	2.6	NJ	Z1
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.28	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.43	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.75	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.33	U	
M+P-XYLENES		0.24	U		0.36	J	P	0.24	U		0.6	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.3	J	CP	5	J	C	0.43	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.83	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.6	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.3	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.35	U	
O-XYLENE		0.14	U		0.41	J	P	0.14	U		0.35	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.33	U	
STYRENE		0.11	U		0.11	U		0.11	U		0.28	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.17	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.33	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	5.9	J	CP	9.8	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.73	U	
TETRAHYDROFURAN		0.64	NJ	Z1									
TOLUENE		0.13	U		0.13	U		0.13	U		0.33	U	
TOTAL XYLENES		0.28	U		0.77	J	P	0.28	U		0.7	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-53A-032613			MRC-MW-53B-032613			MRC-MW72B-032613			TB-032613		
SDG: 240-22475-1	LAB_ID	240-22475-6			240-22475-7			240-22475-2			240-22475-1		
FRACTION: OV	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BUTANE, 2-METHYL-													
CARBON DISULFIDE		0.13	U		0.74	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.74	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.86	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		1	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		1.7	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		1.1	J	P	0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		1.7	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		1.4			6.3			0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.8	U		0.14	U		0.14	U	
CYCLOHEXANE													
DIBROMOMETHANE		0.28	U		1.6	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	1.8	UJ	C	0.31	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		1.5	U		8.6	U		1.5	U		1.5	U	
DIMETHYL ETHER		1.3	NJ	Z1									
ETHYL TERT-BUTYL ETHER		0.11	U		0.63	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.97	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		1.7	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.74	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		1.4	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		1.4	J	C	0.97	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		1.9	U		0.45	B	A	0.33	U	
NAPHTHALENE		0.24	U		1.4	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.69	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.8	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.8	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.74	U		0.13	U		0.13	U	
STYRENE		0.11	U		0.63	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.38	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.74	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	22	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		1.7	U		0.29	U		0.29	U	
TETRAHYDROFURAN													
TOLUENE		0.13	U		0.74	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		1.6	U		0.28	U		0.28	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-110A-032613			MRC-MW-110B-032613			MRC-MW29A-032613			MRC-MW37A-032613		
SDG: 240-22475-1	LAB_ID	240-22475-8			240-22475-9			240-22475-4			240-22475-3		
FRACTION: OV	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.48	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.48	U	
TRICHLOROETHENE		32			11			10			78		
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U		0.53	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.48	UR	C
VINYL CHLORIDE		0.22	J	P	0.22	U		0.59	J	P	0.55	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-53A-032613			MRC-MW-53B-032613			MRC-MW72B-032613			TB-032613		
SDG: 240-22475-1	LAB_ID	240-22475-6			240-22475-7			240-22475-2			240-22475-1		
FRACTION: OV	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,2-DICHLOROETHENE		0.19	U		1.1	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		1.1	U		0.19	U		0.19	U	
TRICHLOROETHENE		10			210			30			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		1.2	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	1.1	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		1.3	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-110A-032613			MRC-MW-110B-032613			MRC-MW-53A-032613			MRC-MW-53B-032613		
SDG: 240-22475-1	LAB_ID	240-22475-8			240-22475-9			240-22475-6			240-22475-7		
FRACTION: OS	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		1.5			0.91	J	P	0.47	U		10		

PROJ_NO: 04795	NSAMPLE	MRC-MW37A-032613			MRC-MW72B-032613		
SDG: 240-22475-1	LAB_ID	240-22475-3			240-22475-2		
FRACTION: OVG	SAMP_DATE	3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.1	U		0.1	U	
ETHENE		0.37	U		0.37	U	
METHANE		0.12	B	A	0.14	B	A

PROJ_NO: 04795	NSAMPLE	MRC-MW-110A-032613			MRC-MW-110B-032613			MRC-MW26A-032613			MRC-MW29A-032613		
SDG: 240-22475-1	LAB_ID	240-22475-8			240-22475-9			240-22475-5			240-22475-4		
FRACTION: M	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U		0.3	U	
ARSENIC		0.9	U		0.9	U		0.9	U		0.9	U	
BARIUM		780			68			340			320		
BERYLLIUM		3.1			0.31	J	P	14			8.7		
CADMIUM		0.11	J	P	0.1	U		0.24	J	P	0.83	J	P
CALCIUM													
CHROMIUM		0.9	U		0.9	U		1.1	J	P	1.6	J	P
COBALT		650			100			320			330		
COPPER		0.5	UL	C	0.56	J	CP	4	L	C	12	L	C
IRON													
LEAD		0.47	J	P	0.47	J	P	0.29	J	P	0.36	J	P
MAGNESIUM													
MANGANESE													
MERCURY		0.1	U		0.1	U		0.1	U		0.15	J	P
MOLYBDENUM		0.2	U		0.2	U		0.21	B	A	0.45	B	A
NICKEL		400	L	C	83	L	C	160	L	C	160	L	C
POTASSIUM													
SELENIUM		0.5	UL	C	0.5	UL	C	1.4	J	CP	0.95	J	CP
SILICON DIOXIDE													
SILVER		0.1	UL	C	0.1	UL	C	0.1	UL	C	0.1	UL	C
SODIUM													
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		0.8	U		0.8	U		0.8	U		1.3	J	P
ZINC		280			130			230			270		

PROJ_NO: 04795	NSAMPLE	MRC-MW37A-032613			MRC-MW-53A-032613			MRC-MW-53B-032613			MRC-MW72B-032613		
SDG: 240-22475-1	LAB_ID	240-22475-3			240-22475-6			240-22475-7			240-22475-2		
FRACTION: M	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		3.4			1.2	J	P			
ARSENIC		0.9	U		0.9	U		0.9	U				
BARIUM		45			200			220					
BERYLLIUM		0.43	J	P	0.32	J	P	1.2					
CADMIUM		0.1	U		0.73	J	P	0.22	J	P			
CALCIUM		43000									1100	J	P
CHROMIUM		0.9	U		1.3	J	P	1.9	J	P			
COBALT		3.2			320			53					
COPPER		0.54	J	CP	10	L	C	4	L	C			
IRON		510									110	J	P
LEAD		0.45	J	P	0.41	J	P	0.2	U				
MAGNESIUM		8400									900	J	P
MANGANESE		33									62		
MERCURY		0.12	U		0.1	U		0.1	U		0.12	U	
MOLYBDENUM		0.2	U		1.4	B	A	0.65	B	A			
NICKEL		1.9	J	CP	300	L	C	72	L	C			
POTASSIUM		5100									1600	J	P
SELENIUM		0.58	J	CP	1.4	J	CP	0.71	J	CP			
SILICON DIOXIDE		6400									8300		
SILVER		0.1	UL	C	0.1	UL	C	0.1	UL	C			
SODIUM		17000									9600		
THALLIUM		0.2	U		0.2	U		0.2	U				
VANADIUM		0.8	U		2.8	J	P	0.8	U				
ZINC		6.4	J	P	300			530					

PROJ_NO: 04795	NSAMPLE	MRC-MW-110A-032613			MRC-MW-110B-032613			MRC-MW37A-032613			MRC-MW-53A-032613		
SDG: 240-22475-1	LAB_ID	240-22475-8			240-22475-9			240-22475-3			240-22475-6		
FRACTION: MISC	SAMP_DATE	3/26/2013			3/26/2013			3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			MG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY								33					
AMMONIA-N								0.066	B	A			
CHLORIDE								73	K	D			
DISSOLVED ORGANIC CARBON								2.9					
NITRATE-N								0.95					
NITRITE-N								0.012	U				
ORTHOPHOSPHATE-P								0.044	U				
PERCHLORATE		0.75			1.2						0.75		
SULFATE								63					
TOTAL DISSOLVED SOLIDS								230					

PROJ_NO: 04795	NSAMPLE	MRC-MW-53B-032613			MRC-MW72B-032613		
SDG: 240-22475-1	LAB_ID	240-22475-7			240-22475-2		
FRACTION: MISC	SAMP_DATE	3/26/2013			3/26/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY					5.7		
AMMONIA-N					0.083	B	A
CHLORIDE					15	K	D
DISSOLVED ORGANIC CARBON					0.62	J	P
NITRATE-N					0.43		
NITRITE-N					0.012	U	
ORTHOPHOSPHATE-P					0.71		
PERCHLORATE		9.3					
SULFATE					1.1		
TOTAL DISSOLVED SOLIDS					15		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110A-032613 Lab Sample ID: 240-22475-8

Matrix: Water Lab File ID: UXR4833.D

Analysis Method: 8260B Date Collected: 03/26/2013 14:27

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 16:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.8		1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	0.26	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	9.6		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	0.60	J	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.69	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110A-032613 | Lab Sample ID: 240-22475-8

Matrix: Water | Lab File ID: UXR4833.D

Analysis Method: 8260B | Date Collected: 03/26/2013 14:27

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	32		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.22	J	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110A-032613 | Lab Sample ID: 240-22475-8

Matrix: Water | Lab File ID: UXR4833.D

Analysis Method: 8260B | Date Collected: 03/26/2013 14:27

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	103		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110A-032613 | Lab Sample ID: 240-22475-8

Matrix: Water | Lab File ID: UXR4833.D

Analysis Method: 8260B | Date Collected: 03/26/2013 14:27

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 0.64

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
109-99-9	Tetrahydrofuran	5.03	0.64	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110B-032613 | Lab Sample ID: 240-22475-9

Matrix: Water | Lab File ID: UXR4834.D

Analysis Method: 8260B | Date Collected: 03/26/2013 15:53

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	2.7	J	5.0	1.1
71-43-2	Benzene	3.3		1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	0.22	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	4.3		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.20	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110B-032613 | Lab Sample ID: 240-22475-9

Matrix: Water | Lab File ID: UXR4834.D

Analysis Method: 8260B | Date Collected: 03/26/2013 15:53

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	0.30	J	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	0.36	J	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	0.41	J	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	11		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110B-032613 Lab Sample ID: 240-22475-9

Matrix: Water Lab File ID: UXR4834.D

Analysis Method: 8260B Date Collected: 03/26/2013 15:53

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	0.77	J	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	105		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110B-032613 Lab Sample ID: 240-22475-9

Matrix: Water Lab File ID: UXR4834.D

Analysis Method: 8260B Date Collected: 03/26/2013 15:53

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 2 TIC Result Total: 1.32

CAS NO.	COMPOUND NAME	RT	RESULT	Q
78-78-4	Butane, 2-methyl-	2.49	1.2	T J N
110-82-7	Cyclohexane	5.25	0.12	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Matrix: Water Lab File ID: UXR4828.D

Analysis Method: 8260B Date Collected: 03/26/2013 11:11

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 15:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.1	J	5.0	1.1
71-43-2	Benzene	0.71	J	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Matrix: Water Lab File ID: UXR4828.D

Analysis Method: 8260B Date Collected: 03/26/2013 11:11

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 15:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.4		1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	10		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Matrix: Water Lab File ID: UXR4828.D

Analysis Method: 8260B Date Collected: 03/26/2013 11:11

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 15:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	103		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Matrix: Water Lab File ID: UXR4828.D

Analysis Method: 8260B Date Collected: 03/26/2013 11:11

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 15:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.3

CAS NO.	COMPOUND NAME	RT	RESULT	Q
115-10-6	Dimethyl ether	1.77	1.3	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 Lab Sample ID: 240-22475-7

Matrix: Water Lab File ID: UXR4832.D

Analysis Method: 8260B Date Collected: 03/26/2013 12:21

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 16:35

Soil Aliquot Vol: Dilution Factor: 5.714

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	29	U	29	6.3
71-43-2	Benzene	0.84	J	5.7	0.74
108-86-1	Bromobenzene	5.7	U	5.7	0.74
74-97-5	Bromochloromethane	5.7	U	5.7	1.7
75-27-4	Bromodichloromethane	5.7	U	5.7	0.86
75-25-2	Bromoform	5.7	U	5.7	3.7
74-83-9	Bromomethane	5.7	U	5.7	2.3
78-93-3	2-Butanone	29	U	29	3.3
75-15-0	Carbon disulfide	5.7	U	5.7	0.74
56-23-5	Carbon tetrachloride	5.7	U	5.7	0.74
108-90-7	Chlorobenzene	5.7	U	5.7	0.86
75-00-3	Chloroethane	5.7	U	5.7	1.7
110-75-8	2-Chloroethyl vinyl ether	57	U	57	5.7
67-66-3	Chloroform	1.1	J	5.7	0.91
74-87-3	Chloromethane	5.7	U	5.7	1.7
95-49-8	2-Chlorotoluene	5.7	U	5.7	0.63
106-43-4	4-Chlorotoluene	5.7	U	5.7	1.0
156-59-2	cis-1,2-Dichloroethene	6.3		5.7	0.97
10061-01-5	cis-1,3-Dichloropropene	5.7	U	5.7	0.80
124-48-1	Dibromochloromethane	5.7	U	5.7	1.0
96-12-8	1,2-Dibromo-3-Chloropropane	29	U	29	3.8
106-93-4	1,2-Dibromoethane	5.7	U	5.7	1.4
74-95-3	Dibromomethane	5.7	U	5.7	1.6
95-50-1	1,2-Dichlorobenzene	5.7	U	5.7	0.74
541-73-1	1,3-Dichlorobenzene	5.7	U	5.7	0.80
106-46-7	1,4-Dichlorobenzene	5.7	U	5.7	0.74
75-71-8	Dichlorodifluoromethane	5.7	U	5.7	1.8
75-34-3	1,1-Dichloroethane	5.7	U	5.7	0.86
107-06-2	1,2-Dichloroethane	5.7	U	5.7	1.3
75-35-4	1,1-Dichloroethene	9.0		5.7	1.1
78-87-5	1,2-Dichloropropane	5.7	U	5.7	1.0
142-28-9	1,3-Dichloropropane	5.7	U	5.7	0.91
594-20-7	2,2-Dichloropropane	5.7	U	5.7	0.74
563-58-6	1,1-Dichloropropene	5.7	U	5.7	0.74
108-20-3	Diisopropyl ether	29	U	29	8.6
100-41-4	Ethylbenzene	5.7	U	5.7	0.97

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 | Lab Sample ID: 240-22475-7

Matrix: Water | Lab File ID: UXR4832.D

Analysis Method: 8260B | Date Collected: 03/26/2013 12:21

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:35

Soil Aliquot Vol: | Dilution Factor: 5.714

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	29	U	29	0.63
87-68-3	Hexachlorobutadiene	5.7	U	5.7	1.7
591-78-6	2-Hexanone	29	U	29	2.3
98-82-8	Isopropylbenzene	5.7	U	5.7	0.74
75-09-2	Methylene Chloride	5.7	U	5.7	1.9
108-10-1	4-Methyl-2-pentanone	29	U	29	1.8
1634-04-4	Methyl tert-butyl ether	5.7	U	5.7	0.97
179601-23-1	m-Xylene & p-Xylene	11	U	11	1.4
91-20-3	Naphthalene	5.7	U	5.7	1.4
104-51-8	n-Butylbenzene	5.7	U	5.7	0.69
103-65-1	n-Propylbenzene	5.7	U	5.7	0.80
95-47-6	o-Xylene	5.7	U	5.7	0.80
99-87-6	p-Isopropyltoluene	5.7	U	5.7	0.69
135-98-8	sec-Butylbenzene	5.7	U	5.7	0.74
100-42-5	Styrene	5.7	U	5.7	0.63
994-05-8	Tert-amyl-methyl ether (TAME)	29	U	29	0.38
75-65-0	tert-Butyl alcohol	110	U	110	22
98-06-6	tert-Butylbenzene	5.7	U	5.7	0.74
630-20-6	1,1,1,2-Tetrachloroethane	5.7	U	5.7	1.3
79-34-5	1,1,2,2-Tetrachloroethane	5.7	U	5.7	1.0
127-18-4	Tetrachloroethene	5.7	U	5.7	1.7
108-88-3	Toluene	5.7	U	5.7	0.74
156-60-5	trans-1,2-Dichloroethene	5.7	U	5.7	1.1
10061-02-6	trans-1,3-Dichloropropene	5.7	U	5.7	1.1
87-61-6	1,2,3-Trichlorobenzene	5.7	U	5.7	0.97
120-82-1	1,2,4-Trichlorobenzene	5.7	U	5.7	0.86
71-55-6	1,1,1-Trichloroethane	5.7	U	5.7	1.3
79-01-6	Trichloroethene	210		5.7	0.97
75-69-4	Trichlorofluoromethane	5.7	U	5.7	1.2
96-18-4	1,2,3-Trichloropropane	5.7	U	5.7	2.5
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	5.7	U	5.7	1.6
526-73-8	1,2,3-Trimethylbenzene	29	U	29	0.034
95-63-6	1,2,4-Trimethylbenzene	5.7	U	5.7	0.69
108-05-4	Vinyl acetate	11	U	11	1.1
75-01-4	Vinyl chloride	5.7	U	5.7	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 Lab Sample ID: 240-22475-7

Matrix: Water Lab File ID: UXR4832.D

Analysis Method: 8260B Date Collected: 03/26/2013 12:21

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 16:35

Soil Aliquot Vol: Dilution Factor: 5.714

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	11	U	11	1.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	105		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 Lab Sample ID: 240-22475-7

Matrix: Water Lab File ID: UXR4832.D

Analysis Method: 8260B Date Collected: 03/26/2013 12:21

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 16:35

Soil Aliquot Vol: Dilution Factor: 5.714

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW29A-032613 | Lab Sample ID: 240-22475-4

Matrix: Water | Lab File ID: UXR4827.D

Analysis Method: 8260B | Date Collected: 03/26/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	2.3	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	3.9		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	5.1		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	3.0		1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW29A-032613 | Lab Sample ID: 240-22475-4

Matrix: Water | Lab File ID: UXR4827.D

Analysis Method: 8260B | Date Collected: 03/26/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	5.0		1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	5.9	J	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	10		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.59	J	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW29A-032613 | Lab Sample ID: 240-22475-4

Matrix: Water | Lab File ID: UXR4827.D

Analysis Method: 8260B | Date Collected: 03/26/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 14:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW29A-032613 Lab Sample ID: 240-22475-4

Matrix: Water Lab File ID: UXR4827.D

Analysis Method: 8260B Date Collected: 03/26/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 14:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 2 TIC Result Total: 3.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
115-10-6	Dimethyl ether	1.77	2.4	T J N
78-78-4	Butane, 2-methyl-	2.49	1.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Matrix: Water Lab File ID: UXR4831.D

Analysis Method: 8260B Date Collected: 03/26/2013 12:25

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 16:12

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	13	U	13	2.8
71-43-2	Benzene	2.5	U	2.5	0.33
108-86-1	Bromobenzene	2.5	U	2.5	0.33
74-97-5	Bromochloromethane	2.5	U	2.5	0.73
75-27-4	Bromodichloromethane	2.5	U	2.5	0.38
75-25-2	Bromoform	2.5	U	2.5	1.6
74-83-9	Bromomethane	2.5	U	2.5	1.0
78-93-3	2-Butanone	13	U	13	1.4
75-15-0	Carbon disulfide	2.5	U	2.5	0.33
56-23-5	Carbon tetrachloride	2.5	U	2.5	0.33
108-90-7	Chlorobenzene	2.5	U	2.5	0.38
75-00-3	Chloroethane	2.5	U	2.5	0.73
110-75-8	2-Chloroethyl vinyl ether	25	U	25	2.5
67-66-3	Chloroform	2.5	U	2.5	0.40
74-87-3	Chloromethane	2.5	U	2.5	0.75
95-49-8	2-Chlorotoluene	2.5	U	2.5	0.28
106-43-4	4-Chlorotoluene	2.5	U	2.5	0.45
156-59-2	cis-1,2-Dichloroethene	1.4	J	2.5	0.43
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	0.35
124-48-1	Dibromochloromethane	2.5	U	2.5	0.45
96-12-8	1,2-Dibromo-3-Chloropropane	13	U	13	1.7
106-93-4	1,2-Dibromoethane	2.5	U	2.5	0.60
74-95-3	Dibromomethane	2.5	U	2.5	0.70
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	0.33
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	0.35
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	0.33
75-71-8	Dichlorodifluoromethane	2.5	U	2.5	0.78
75-34-3	1,1-Dichloroethane	2.5	U	2.5	0.38
107-06-2	1,2-Dichloroethane	2.5	U	2.5	0.55
75-35-4	1,1-Dichloroethene	2.5	U	2.5	0.48
78-87-5	1,2-Dichloropropane	2.5	U	2.5	0.45
142-28-9	1,3-Dichloropropane	2.5	U	2.5	0.40
594-20-7	2,2-Dichloropropane	2.5	U	2.5	0.33
563-58-6	1,1-Dichloropropene	2.5	U	2.5	0.33
108-20-3	Diisopropyl ether	13	U	13	3.8
100-41-4	Ethylbenzene	2.5	U	2.5	0.43

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW37A-032613 | Lab Sample ID: 240-22475-3

Matrix: Water | Lab File ID: UXR4831.D

Analysis Method: 8260B | Date Collected: 03/26/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:12

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	13	U	13	0.28
87-68-3	Hexachlorobutadiene	2.5	U	2.5	0.75
591-78-6	2-Hexanone	13	U	13	1.0
98-82-8	Isopropylbenzene	2.5	U	2.5	0.33
75-09-2	Methylene Chloride	2.5	U	2.5	0.83
108-10-1	4-Methyl-2-pentanone	13	U	13	0.80
1634-04-4	Methyl tert-butyl ether	2.5	U	2.5	0.43
179601-23-1	m-Xylene & p-Xylene	5.0	U	5.0	0.60
91-20-3	Naphthalene	2.5	U	2.5	0.60
104-51-8	n-Butylbenzene	2.5	U	2.5	0.30
103-65-1	n-Propylbenzene	2.5	U	2.5	0.35
95-47-6	o-Xylene	2.5	U	2.5	0.35
99-87-6	p-Isopropyltoluene	2.5	U	2.5	0.30
135-98-8	sec-Butylbenzene	2.5	U	2.5	0.33
100-42-5	Styrene	2.5	U	2.5	0.28
994-05-8	Tert-amyl-methyl ether (TAME)	13	U	13	0.17
75-65-0	tert-Butyl alcohol	50	U	50	9.8
98-06-6	tert-Butylbenzene	2.5	U	2.5	0.33
630-20-6	1,1,1,2-Tetrachloroethane	2.5	U	2.5	0.58
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.45
127-18-4	Tetrachloroethene	2.5	U	2.5	0.73
108-88-3	Toluene	2.5	U	2.5	0.33
156-60-5	trans-1,2-Dichloroethene	2.5	U	2.5	0.48
10061-02-6	trans-1,3-Dichloropropene	2.5	U	2.5	0.48
87-61-6	1,2,3-Trichlorobenzene	2.5	U	2.5	0.43
120-82-1	1,2,4-Trichlorobenzene	2.5	U	2.5	0.38
71-55-6	1,1,1-Trichloroethane	2.5	U	2.5	0.55
79-01-6	Trichloroethene	78		2.5	0.43
75-69-4	Trichlorofluoromethane	2.5	U	2.5	0.53
96-18-4	1,2,3-Trichloropropane	2.5	U	2.5	1.1
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	2.5	U	2.5	0.70
526-73-8	1,2,3-Trimethylbenzene	13	U	13	0.015
95-63-6	1,2,4-Trimethylbenzene	2.5	U	2.5	0.30
108-05-4	Vinyl acetate	5.0	U	5.0	0.48
75-01-4	Vinyl chloride	2.5	U	2.5	0.55

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW37A-032613 | Lab Sample ID: 240-22475-3

Matrix: Water | Lab File ID: UXR4831.D

Analysis Method: 8260B | Date Collected: 03/26/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:12

Soil Aliquot Vol: | Dilution Factor: 2.5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	5.0	U	5.0	0.70

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	104		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Matrix: Water Lab File ID: UXR4831.D

Analysis Method: 8260B Date Collected: 03/26/2013 12:25

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 16:12

Soil Aliquot Vol: Dilution Factor: 2.5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q
115-10-6	Dimethyl ether	1.76	2.6	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Matrix: Water Lab File ID: UXR4869.D

Analysis Method: 8260B Date Collected: 03/26/2013 11:05

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 18:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80568 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.2	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW72B-032613 | Lab Sample ID: 240-22475-2

Matrix: Water | Lab File ID: UXR4869.D

Analysis Method: 8260B | Date Collected: 03/26/2013 11:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 18:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80568 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	0.45	J B	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	30		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW72B-032613 | Lab Sample ID: 240-22475-2

Matrix: Water | Lab File ID: UXR4869.D

Analysis Method: 8260B | Date Collected: 03/26/2013 11:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 18:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80568 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	110		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Matrix: Water Lab File ID: UXR4869.D

Analysis Method: 8260B Date Collected: 03/26/2013 11:05

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 18:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80568 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: TB-032613 | Lab Sample ID: 240-22475-1

Matrix: WQ | Lab File ID: UXR4829.D

Analysis Method: 8260B | Date Collected: 03/26/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 15:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.1	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: TB-032613 | Lab Sample ID: 240-22475-1

Matrix: WQ | Lab File ID: UXR4829.D

Analysis Method: 8260B | Date Collected: 03/26/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 15:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: TB-032613 | Lab Sample ID: 240-22475-1

Matrix: WQ | Lab File ID: UXR4829.D

Analysis Method: 8260B | Date Collected: 03/26/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 15:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	105		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		63-129
2037-26-5	Toluene-d8 (Surr)	82		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: TB-032613 Lab Sample ID: 240-22475-1

Matrix: WQ Lab File ID: UXR4829.D

Analysis Method: 8260B Date Collected: 03/26/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 15:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110A-032613 | Lab Sample ID: 240-22475-8

Matrix: Water | Lab File ID: 0403015.D

Analysis Method: 8270D | Date Collected: 03/26/2013 14:27

Extract. Method: 3520C | Date Extracted: 03/29/2013 10:47

Sample wt/vol: 1050(mL) | Date Analyzed: 04/03/2013 15:20

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.5		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	68		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	74		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	68		21-110
4165-62-2	Phenol-d5 (Surr)	70		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110B-032613 | Lab Sample ID: 240-22475-9

Matrix: Water | Lab File ID: 0403016.D

Analysis Method: 8270D | Date Collected: 03/26/2013 15:53

Extract. Method: 3520C | Date Extracted: 03/29/2013 10:47

Sample wt/vol: 1030(mL) | Date Analyzed: 04/03/2013 15:41

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.91	J	0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	64		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	72		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	64		21-110
4165-62-2	Phenol-d5 (Surr)	65		21-110
1718-51-0	Terphenyl-d14 (Surr)	55		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53A-032613 | Lab Sample ID: 240-22475-6

Matrix: Water | Lab File ID: 0403013.D

Analysis Method: 8270D | Date Collected: 03/26/2013 11:11

Extract. Method: 3520C | Date Extracted: 03/29/2013 10:47

Sample wt/vol: 1050(mL) | Date Analyzed: 04/03/2013 14:36

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	55		20-110
367-12-4	2-Fluorophenol (Surr)	56		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	77		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	58		21-110
4165-62-2	Phenol-d5 (Surr)	61		21-110
1718-51-0	Terphenyl-dl4 (Surr)	55		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 | Lab Sample ID: 240-22475-7

Matrix: Water | Lab File ID: 0403014.D

Analysis Method: 8270D | Date Collected: 03/26/2013 12:21

Extract. Method: 3520C | Date Extracted: 03/29/2013 10:47

Sample wt/vol: 1050(mL) | Date Analyzed: 04/03/2013 14:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	10		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		20-110
367-12-4	2-Fluorophenol (Surr)	70		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	78		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	71		21-110
4165-62-2	Phenol-d5 (Surr)	71		21-110
1718-51-0	Terphenyl-d14 (Surr)	61		24-110

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Matrix: Water Lab File ID: Z0032813.D

Analysis Method: RSK-175 Date Collected: 03/26/2013 12:25

Sample wt/vol: 17(mL) Date Analyzed: 03/28/2013 15:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79766 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.12	J B	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	100		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Matrix: Water Lab File ID: Z0032812.D

Analysis Method: RSK-175 Date Collected: 03/26/2013 11:05

Sample wt/vol: 17(mL) Date Analyzed: 03/28/2013 14:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79766 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.14	J B	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	101		40-122

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110A-032613 Lab Sample ID: 240-22475-8

Matrix: Water Lab File ID: 02APR13-perc-075.d

Analysis Method: 6850 Date Collected: 03/26/2013 14:27

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 11:30

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.75		0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-110B-032613 Lab Sample ID: 240-22475-9

Matrix: Water Lab File ID: 02APR13-perc-076.d

Analysis Method: 6850 Date Collected: 03/26/2013 15:53

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 11:46

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	1.2		0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Matrix: Water Lab File ID: 02APR13-perc-073.d

Analysis Method: 6850 Date Collected: 03/26/2013 11:11

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 10:57

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.75		0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 Lab Sample ID: 240-22475-7

Matrix: Water Lab File ID: 02APR13-perc-074.d

Analysis Method: 6850 Date Collected: 03/26/2013 12:21

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 11:13

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	9.3		0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-110A-032613 Lab Sample ID: 240-22475-8

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 14:27

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	3.1	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.11	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	780	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	400	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.47	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	650	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	280	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-110B-032613 Lab Sample ID: 240-22475-9

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 15:53

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.31	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	68	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.56	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	83	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.47	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	100	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	130	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 11:11

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	3.4	2.0	0.30	ug/L			1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.32	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.73	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	200	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.3	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	10	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	300	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.41	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	1.4	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	320	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	300	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.4	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	2.8	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-53B-032613 Lab Sample ID: 240-22475-7

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:21

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	1.2	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.2	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.22	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	220	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.9	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	4.0	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	72	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	0.71	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	53	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	530	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.65	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW26A-032613 Lab Sample ID: 240-22475-5

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 15:15

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	14	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.24	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	340	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.1	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	4.0	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	160	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.29	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	1.4	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	320	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	230	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.21	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW29A-032613 Lab Sample ID: 240-22475-4

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 13:40

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	8.7	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.83	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	320	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.6	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	12	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	160	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.36	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.95	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	330	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	270	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.45	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	1.3	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:25

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.43	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	45	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.54	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	1.9	2.0	0.50	ug/L	J		1	6020
7439-92-1	Lead	0.45	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.58	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	3.2	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	6.4	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-110A-032613 Lab Sample ID: 240-22475-8

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 14:27

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-110B-032613 Lab Sample ID: 240-22475-9

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 15:53

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-53A-032613 Lab Sample ID: 240-22475-6

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 11:11

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-53B-032613 Lab Sample ID: 240-22475-7

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:21

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW26A-032613 Lab Sample ID: 240-22475-5

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 15:15

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW29A-032613 Lab Sample ID: 240-22475-4

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 13:40

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.15	0.20	0.10	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:25

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 11:05

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:25

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	43000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	510	200	81	ug/L			1	6010C
7440-09-7	Potassium	5100	5000	72	ug/L			1	6010C
7439-95-4	Magnesium	8400	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	33	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	17000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	6400	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 11:05

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	1100	5000	130	ug/L	J	B	1	6010C
7439-89-6	Iron	110	200	81	ug/L	J		1	6010C
7440-09-7	Potassium	1600	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	900	5000	34	ug/L	J	B	1	6010C
7439-96-5	Manganese	62	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	9600	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	8300	1100	14	ug/L			1	6010C

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:25

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	33	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	230	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	73	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.95	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	63	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.066	0.20	0.035	mg/L	J	B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 11:05

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	5.7	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	15	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	15	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.43	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	1.1	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.71	0.50	0.044	mg/L			1	300.0
7664-41-7	Ammonia (as N)	0.083	0.20	0.035	mg/L	J	B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW37A-032613 Lab Sample ID: 240-22475-3

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 12:25

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	2.9	1.0	0.24	mg/L			1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW72B-032613 Lab Sample ID: 240-22475-2

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG ID.:

Matrix: Water Date Sampled: 03/26/2013 11:05

Reporting Basis: WET Date Received: 03/27/2013 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	0.62	1.0	0.24	mg/L	J		1	9060

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 240-22475-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-53A-032613	240-22475-6	NM	3/26/2013	4/16/2013	4/16/2013	21	0	21
HG	UG/L	MRC-MW-53B-032613	240-22475-7	NM	3/26/2013	4/16/2013	4/16/2013	21	0	21
HG	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/3/2013	4/4/2013	8	1	9
HG	UG/L	MRC-MW29A-032613	240-22475-4	NM	3/26/2013	4/16/2013	4/16/2013	21	0	21
HG	UG/L	MRC-MW26A-032613	240-22475-5	NM	3/26/2013	4/16/2013	4/16/2013	21	0	21
HG	UG/L	MRC-MW-110B-032613	240-22475-9	NM	3/26/2013	4/16/2013	4/16/2013	21	0	21
HG	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/3/2013	4/4/2013	8	1	9
HG	UG/L	MRC-MW-110A-032613	240-22475-8	NM	3/26/2013	4/16/2013	4/16/2013	21	0	21
M	UG/L	MRC-MW-110A-032613	240-22475-8	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10
M	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/29/2013	4/1/2013	3	3	6
M	UG/L	MRC-MW-53B-032613	240-22475-7	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10
M	UG/L	MRC-MW-53A-032613	240-22475-6	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10
M	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10
M	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/29/2013	4/1/2013	3	3	6
M	UG/L	MRC-MW29A-032613	240-22475-4	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-110B-032613	240-22475-9	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10
M	UG/L	MRC-MW26A-032613	240-22475-5	NM	3/26/2013	4/4/2013	4/5/2013	9	1	10
ALK	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
ALK	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
CL	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/8/2013	4/8/2013	13	0	13
CL	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/8/2013	4/8/2013	13	0	13
DOC	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/6/2013	4/6/2013	11	0	11
DOC	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/6/2013	4/6/2013	11	0	11
NH3	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
NH3	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
NTA	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
NTA	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
NTI	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
NTI	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
OPO4	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
OPO4	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
PCL	UG/L	MRC-MW-110B-032613	240-22475-9	NM	3/26/2013	4/2/2013	4/3/2013	7	1	8
PCL	UG/L	MRC-MW-110A-032613	240-22475-8	NM	3/26/2013	4/2/2013	4/3/2013	7	1	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MRC-MW-53A-032613	240-22475-6	NM	3/26/2013	4/2/2013	4/3/2013	7	1	8
PCL	UG/L	MRC-MW-53B-032613	240-22475-7	NM	3/26/2013	4/2/2013	4/3/2013	7	1	8
PCS	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/29/2013	3/29/2013	3	0	3
PCS	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/29/2013	3/29/2013	3	0	3
SO4	MG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/6/2013	4/6/2013	11	0	11
SO4	MG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/6/2013	4/6/2013	11	0	11
OS	UG/L	MRC-MW-110A-032613	240-22475-8	NM	3/26/2013	3/29/2013	4/3/2013	3	5	8
OS	UG/L	MRC-MW-53B-032613	240-22475-7	NM	3/26/2013	3/29/2013	4/3/2013	3	5	8
OS	UG/L	MRC-MW-110B-032613	240-22475-9	NM	3/26/2013	3/29/2013	4/3/2013	3	5	8
OS	UG/L	MRC-MW-53A-032613	240-22475-6	NM	3/26/2013	3/29/2013	4/3/2013	3	5	8
OV	UG/L	MRC-MW-53A-032613	240-22475-6	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	TB-032613	240-22475-1	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	MRC-MW-53B-032613	240-22475-7	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	MRC-MW29A-032613	240-22475-4	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	MRC-MW-110B-032613	240-22475-9	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	MRC-MW-110A-032613	240-22475-8	NM	3/26/2013	4/3/2013	4/3/2013	8	0	8
OV	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	4/4/2013	4/4/2013	9	0	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ETHA	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
ETHA	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
ETHE	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
ETHE	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
METH	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
METH	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
OVG	UG/L	MRC-MW37A-032613	240-22475-3	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2
OVG	UG/L	MRC-MW72B-032613	240-22475-2	NM	3/26/2013	3/28/2013	3/28/2013	2	0	2

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: Tetra Tech	Project Manager: Tony Aparavage	Date: 3/26/13	Chain of Custody Number: 114473
Address: 20251 Century Blvd Ste 200	Telephone Number (Area Code)/Fax Number: (301) 528-5552	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Stu Cameron	Lab Contact:	
Project Name and Location (State): MRC GW Sampling MD	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112I C04795-02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	VOCs	Total Metals	Dissolved Metals	Ammonia	Alkalinity, TDS, Nitrate, Fe, Mn, Ca, Mg, Na, SO4	DOC	Perchlorate	1,4 Dioxane
TB-032613	—	—		X						2			X							
MRC-MW72B-032613	3/26/13	1105		X			1	3	1	5			X		X	X	X	X	X	
MRC-MW37A-032613		1225		X			1	3	2	5			X	X	X	X	X	X	X	
MRC-MW29A-032613		1340		X					1	3			X	X						
MRC-MW26A-032613		1515		X					1					X						
MRC-MW-53A-032613		1111		X			3		1	3			X	X					X	X
MRC-MW-53B-032613		1221		X			3		1	3			X	X					X	X
MRC-MW-110A-032613		1427		X			3		1	3			X	X					X	X
MRC-MW-110B-032613		1553		X			3		1	3			X	X					X	X

Special Instructions/ Conditions of Receipt

240-22475 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ are retained

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	3-26-13	1615	1. Received By	3/26/13	1615
2. Relinquished By	3/26/13	1705	2. Received By	3/27/13	930
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22475

Client TETRA TECH Site Name _____ By: _____ (Signature)

Cooler Received on 3-27-13 Opened on 3-27-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF –2 °C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 4G	(CF 0 °C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	☐ Multiple on Back
IR GUN# 5G	(CF 0 °C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 8	(CF 0 °C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	

2. Were custody seals on the outside of the cooler(s)?	If Yes Quantity 1@4	(Yes) No
-Were custody seals on the outside of the cooler(s) signed & dated?		(Yes) No NA
-Were custody seals on the bottle(s)?		Yes (No)
3. Shippers' packing slip attached to the cooler(s)?		(Yes) No
4. Did custody papers accompany the sample(s)?		(Yes) No
5. Were the custody papers relinquished & signed in the appropriate place?		(Yes) No
6. Did all bottles arrive in good condition (Unbroken)?		(Yes) No
7. Could all bottle labels be reconciled with the COC?		(Yes) No
8. Were correct bottle(s) used for the test(s) indicated?		(Yes) No
9. Sufficient quantity received to perform indicated analyses?		(Yes) No
10. Were sample(s) at the correct pH upon receipt?		(Yes) No NA
11. Were VOAs on the COC?		(Yes) No
12. Were air bubbles >6 mm in any VOA vials?		Yes (No) NA
13. Was a trip blank present in the cooler(s)?		(Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
1105	<2 <2	3-27-13	TL
1225	<2 <2 <2		
1340	<2		
1515	<2		
1111	<2		
1221	<2		
1427	<2		
1553	<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client cooler	3.0	1.0	1	ice
client cooler	3.2	1.2	1	ice

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22475-1

Login Number: 22475
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/28/13 12:57 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22475-1

Login Number: 22475
List Number: 2
Creator: Freitag, Kevin R

List Source: TestAmerica Irvine
List Creation: 04/17/13 10:10 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22475-1

Login Number: 22475
List Number: 1
Creator: Sadler, Jeremy

List Source: TestAmerica Sacramento
List Creation: 03/28/13 11:56 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW SAMPLING MD

Report Number: 240-22475-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury (Samples 4 - 9 only for Mercury) analysis was performed at the TestAmerica Irvine Laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 03/27/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.0 and 1.2 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-032613 (240-22475-1), MRC-MW72B-032613 (240-22475-2), MRC-MW37A-032613 (240-22475-3), MRC-MW29A-032613 (240-22475-4), MRC-MW-53A-032613 (240-22475-6), MRC-MW-53B-032613 (240-22475-7), MRC-MW-110A-032613 (240-22475-8) and MRC-MW-110B-032613 (240-22475-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/03/2013 and 04/04/2013.

Methylene Chloride was detected in method blank MB 240-80568/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Samples MRC-MW37A-032613 (240-22475-3)[2.5X] and MRC-MW-53B-032613 (240-22475-7)[5.71X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No MS/MSD for batch 80415 due to instrument failure.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW-53A-032613 (240-22475-6), MRC-MW-53B-032613 (240-22475-7), MRC-MW-110A-032613 (240-22475-8) and MRC-MW-110B-032613 (240-22475-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 03/29/2013 and analyzed on 04/03/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 03/28/2013.

Methane was detected in method blank MB 240-79766/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the dissolved gases analyses. All other quality control parameters were within the acceptance limits.

PERCHLORATE

Samples MRC-MW-53A-032613 (240-22475-6), MRC-MW-53B-032613 (240-22475-7), MRC-MW-110A-032613 (240-22475-8) and MRC-MW-110B-032613 (240-22475-9) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/02/2013 and analyzed on 04/03/2013.

No difficulties were encountered during the perchlorate analyses. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/29/2013 and analyzed on 04/01/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-79873/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW37A-032613 (240-22475-3), MRC-MW29A-032613 (240-22475-4), MRC-MW26A-032613 (240-22475-5), MRC-MW-53A-032613 (240-22475-6), MRC-MW-53B-032613 (240-22475-7), MRC-MW-110A-032613 (240-22475-8) and MRC-MW-110B-032613 (240-22475-9) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/04/2013 and analyzed on 04/05/2013.

Molybdenum was detected in method blank MB 440-96231/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW72B-032613 (240-22475-2), MRC-MW37A-032613 (240-22475-3), MRC-MW29A-032613 (240-22475-4), MRC-MW26A-032613 (240-22475-5), MRC-MW-53A-032613 (240-22475-6), MRC-MW-53B-032613 (240-22475-7), MRC-MW-110A-032613 (240-22475-8) and MRC-MW-110B-032613 (240-22475-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/03/2013 and 04/16/2013 and analyzed on 04/04/2013 and 04/16/2013.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/29/2013.

No difficulties were encountered during the TDS analyses. All quality control parameters were within the acceptance limits.

ANIONS

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 03/28/2013.

Orthophosphate as P failed the recovery criteria high for the MS of sample MRC-MW37A-032613MS (240-22475-3) in batch 240-79687.

The orthophosphate matrix spike / matrix spike duplicate (MS/MSD) recoveries for IC batch 79687 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ANIONS

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/06/2013 and 04/08/2013.

Chloride was detected in method blank MB 240-80760/29 at a level that was above the method detection limit but below the reporting

limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Chloride failed the recovery criteria high for the MS of sample MRC-MW72B-032613MS (240-22475-2) in batch 240-81024.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ALKALINITY

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/03/2013.

No difficulties were encountered during the alkalinity analyses. All quality control parameters were within the acceptance limits.

AMMONIA

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/03/2013.

Ammonia (as N) was detected in method blank MB 240-80480/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the ammonia analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Samples MRC-MW72B-032613 (240-22475-2) and MRC-MW37A-032613 (240-22475-3) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/06/2013.

No difficulties were encountered during the TOC analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22475-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
RSK-175	Dissolved Gases (GC)	RSK	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6010C	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL IRV
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9060	Organic Carbon, Dissolved (DOC)	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22475-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22475-1	TB-032613	WQ	03/26/13 00:00	03/27/13 09:30
240-22475-2	MRC-MW72B-032613	Water	03/26/13 11:05	03/27/13 09:30
240-22475-3	MRC-MW37A-032613	Water	03/26/13 12:25	03/27/13 09:30
240-22475-4	MRC-MW29A-032613	Water	03/26/13 13:40	03/27/13 09:30
240-22475-5	MRC-MW26A-032613	Water	03/26/13 15:15	03/27/13 09:30
240-22475-6	MRC-MW-53A-032613	Water	03/26/13 11:11	03/27/13 09:30
240-22475-7	MRC-MW-53B-032613	Water	03/26/13 12:21	03/27/13 09:30
240-22475-8	MRC-MW-110A-032613	Water	03/26/13 14:27	03/27/13 09:30
240-22475-9	MRC-MW-110B-032613	Water	03/26/13 15:53	03/27/13 09:30

Detection Limit Exceptions Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22475-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260B	WQ	2-Butanone	ug/L	5.0	10
8260B	WQ	2-Hexanone	ug/L	5.0	10
8260B	WQ	4-Methyl-2-pentanone	ug/L	5.0	10
8260B	WQ	Acetone	ug/L	5.0	10
8260B	WQ	Diisopropyl ether	ug/L	5.0	10
8260B	WQ	tert-Butyl alcohol	ug/L	20	50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.
F	MS or MSD exceeds the control limits

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

LCMS

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
U	Indicates the analyte was analyzed for but not detected.
F	MS or MSD exceeds the control limits
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: BFB311.D BFB Injection Date: 02/26/2013

Instrument ID: A3UX17 BFB Injection Time: 07:37

Analysis Batch No.: 76432

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.6	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.6	(0.9)1
174	50.0 - 120.00 % of mass 95	72.5	
175	5.0 - 9.0 % of mass 174	5.0	(6.9)1
176	95.0 - 101.0 % of mass 174	70.2	(96.8)1
177	5.0 - 9.0 % of mass 176	4.0	(5.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-76432/2	UXR3873.D	02/26/2013	08:04
	STD8260 240-76432/3	UXR3874.D	02/26/2013	08:27
	STD8260 240-76432/4	UXR3875.D	02/26/2013	08:49
	STD8260 240-76432/5	UXR3876.D	02/26/2013	09:12
	STD8260 240-76432/6	UXR3877.D	02/26/2013	09:34
	STD8260 240-76432/7	UXR3878.D	02/26/2013	09:56
	STDA9 240-76432/8	UXR3879.D	02/26/2013	10:19
	STDA9 240-76432/9	UXR3880.D	02/26/2013	10:41
	STDA9 240-76432/10	UXR3881.D	02/26/2013	11:03
	STDA9 240-76432/11	UXR3882.D	02/26/2013	11:26
	STDA9 240-76432/12	UXR3883.D	02/26/2013	11:48
	STDA9 240-76432/13	UXR3884.D	02/26/2013	12:10
	ICV 240-76432/14	UXR3885.D	02/26/2013	12:33

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 08:04 Calibration End Date: 02/26/2013 09:56 Calibration ID: 13870

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-76432/7	UXR3878.D
Level 2	STD8260 240-76432/6	UXR3877.D
Level 3	STD8260 240-76432/5	UXR3876.D
Level 4	STD8260 240-76432/4	UXR3875.D
Level 5	STD8260 240-76432/3	UXR3874.D
Level 6	STD8260 240-76432/2	UXR3873.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1795 0.1723	0.1896	0.1869	0.1792	0.1924	Ave		0.1833				4.1		15.0			
Chloromethane	0.3832 0.2956	0.3357	0.3202	0.3037	0.3021	Ave		0.3234			0.1000	10.0		15.0			
Vinyl chloride	0.4103 0.3470	0.3699	0.3600	0.3345	0.3494	Ave		0.3618				7.4		15.0			
Bromomethane	0.3056 0.2162	0.2140	0.2005	0.1977	0.2070	Lin1	0.0312	0.2086							0.9980		0.9900
Chloroethane	0.3390 0.2698	0.2818	0.2581	0.2479	0.2614	Ave		0.2763				12.0		15.0			
Trichlorofluoromethane	0.4211 0.4239	0.4197	0.4082	0.3804	0.4153	Ave		0.4114				3.9		15.0			
~~Acrolein~~	0.0345 0.0405	0.0386	0.0383	0.0391	0.0410	Ave		~~0.0387~~				6.0		15.0			
1,1-Dichloroethene	0.2781 0.2741	0.2616	0.2612	0.2647	0.2667	Ave		0.2677				2.6		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2095 0.1941	0.1906	0.1941	0.1869	0.1890	Ave		0.1940				4.2		15.0			
Acetone	0.0984 0.0626	0.0718	0.0675	0.0644	0.0668	Lin1	0.0360	0.0633							0.9990		0.9900
Iodomethane	0.4072 0.4007	0.3985	0.3872	0.3925	0.3928	Ave		0.3965				1.8		15.0			
Carbon disulfide	0.7695 0.8909	0.7670	0.7866	0.7932	0.8349	Ave		0.8070				5.9		15.0			
~~Acetonitrile~~	0.0359 0.0297	0.0322	0.0306	0.0309	0.0309	Ave		~~0.0317~~				7.0		15.0			
Methyl acetate	0.1715 0.1644	0.1678	0.1640	0.1636	0.1664	Ave		0.1663				1.8		15.0			
Methylene Chloride	0.6015 0.3075	0.3758	0.3350	0.3146	0.3069	Lin1	0.1489	0.3022							1.0000		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 08:04 Calibration End Date: 02/26/2013 09:56 Calibration ID: 13870

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0120 0.0094	0.0101	0.0101	0.0102	0.0100	Ave		0.0103				8.6		15.0			
Acrylonitrile	0.0880 0.0953	0.0962	0.0908	0.0983	0.0997	Ave		0.0947				4.7		15.0			
Methyl tert-butyl ether	0.5425 0.6423	0.5406	0.5748	0.5968	0.6080	Ave		0.5842				6.8		15.0			
trans-1,2-Dichloroethene	0.3011 0.3044	0.2804	0.2933	0.3003	0.3003	Ave		0.2966				2.9		15.0			
Hexane	0.0785 0.0742	0.0655	0.0711	0.0712	0.0704	Ave		0.0718				6.0		15.0			
1,1-Dichloroethane	0.5342 0.5281	0.4886	0.5105	0.5074	0.5133	Ave		0.5137			0.1000	3.1		15.0			
Vinyl acetate	0.0220 0.0417	0.0298	0.0338	0.0354	0.0391	Lin1	-0.014	0.0404							0.9960		0.9900
2,2-Dichloropropane	0.1957 0.2188	0.1811	0.1962	0.2002	0.2105	Ave		0.2004				6.5		15.0			
cis-1,2-Dichloroethene	0.3097 0.3235	0.2980	0.3041	0.3095	0.3118	Ave		0.3095				2.8		15.0			
2-Butanone	0.0865 0.0857	0.0799	0.0829	0.0849	0.0875	Ave		0.0846				3.3		15.0			
Bromochloromethane	0.1301 0.1376	0.1316	0.1346	0.1347	0.1378	Ave		0.1344				2.3		15.0			
Tetrahydrofuran	0.0481 0.0555	0.0567	0.0526	0.0516	0.0548	Ave		0.0532				5.9		15.0			
Chloroform	0.4651 0.4895	0.4681	0.4855	0.4778	0.4813	Ave		0.4779				2.0		15.0			
1,1,1-Trichloroethane	0.2975 0.3529	0.3035	0.3314	0.3311	0.3393	Ave		0.3259				6.5		15.0			
Cyclohexane	0.4270 0.5614	0.4664	0.4945	0.5073	0.5263	Ave		0.4971				9.4		15.0			
1,1-Dichloropropene	0.3348 0.4108	0.3578	0.3870	0.3854	0.4001	Ave		0.3793				7.4		15.0			
Carbon tetrachloride	0.2601 0.3120	0.2578	0.2779	0.2893	0.2984	Ave		0.2826				7.6		15.0			
Benzene	1.2827 1.2617	1.2054	1.2116	1.2202	1.2022	Ave		1.2306				2.7		15.0			
1,2-Dichloroethane	0.4148 0.3760	0.3763	0.3869	0.3735	0.3739	Ave		0.3836				4.2		15.0			
Trichloroethene	0.3113 0.2802	0.2722	0.2796	0.2748	0.2736	Ave		0.2819				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 08:04 Calibration End Date: 02/26/2013 09:56 Calibration ID: 13870

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4346 0.5418	0.4334	0.4817	0.4890	0.5130	Ave		0.4823				8.9		15.0			
1,2-Dichloropropane	0.2949 0.2829	0.2616	0.2726	0.2730	0.2698	Ave		0.2758				4.2		15.0			
~~1,4-Dioxane~~	0.0021 0.0019	0.0020	0.0022	0.0022	0.0022	Ave		~~0.0021~~				6.4		15.0			
Dibromomethane	0.1533 0.1510	0.1479	0.1481	0.1465	0.1477	Ave		0.1491				1.7		15.0			
Bromodichloromethane	0.2604 0.3162	0.2627	0.2772	0.2847	0.2915	Ave		0.2821				7.3		15.0			
2-Chloroethyl vinyl ether	0.0857 0.1482	0.0950	0.1124	0.1300	0.1425	Lin1	-0.106	0.1444							0.9950		0.9900
cis-1,3-Dichloropropene	0.2465 0.3893	0.2458	0.3000	0.3235	0.3492	Lin1	-0.127	0.3699							0.9930		0.9900
4-Methyl-2-pentanone	0.1159 0.1812	0.1168	0.1426	0.1600	0.1752	Lin1	-0.118	0.1769							0.9960		0.9900
Toluene	1.3597 1.6334	1.4197	1.5159	1.5503	1.5342	Ave		1.5022				6.5		15.0			
trans-1,3-Dichloropropene	0.2482 0.3971	0.2513	0.2930	0.3286	0.3466	Lin1	-0.132	0.3740							0.9920		0.9900
Ethyl methacrylate	0.1942 0.3645	0.2098	0.2544	0.2974	0.3250	Lin1	-0.147	0.3449							0.9910		0.9900
1,1,2-Trichloroethane	0.2646 0.2670	0.2550	0.2618	0.2726	0.2618	Ave		0.2638				2.2		15.0			
Tetrachloroethene	0.2651 0.2793	0.2734	0.2837	0.2770	0.2658	Ave		0.2740				2.7		15.0			
1,3-Dichloropropane	0.4890 0.5181	0.4964	0.5186	0.5260	0.4954	Ave		0.5073				3.0		15.0			
2-Hexanone	0.0866 0.1453	0.0971	0.1185	0.1343	0.1411	Lin1	-0.094	0.1431							0.9970		0.9900
Dibromochloromethane	0.1825 0.2645	0.1866	0.2101	0.2292	0.2353	Ave		0.2180				14.0		15.0			
1,2-Dibromoethane	0.2193 0.2623	0.2296	0.2419	0.2537	0.2472	Ave		0.2423				6.5		15.0			
Chlorobenzene	1.0371 1.0285	0.9636	0.9893	1.0029	0.9689	Ave		0.9984			0.3000	3.0		15.0			
1,1,1,2-Tetrachloroethane	0.2816 0.3180	0.2443	0.2754	0.2829	0.2885	Ave		0.2818				8.4		15.0			
Ethylbenzene	0.4442 0.5751	0.4433	0.5006	0.5413	0.5414	Ave		0.5077				11.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 08:04 Calibration End Date: 02/26/2013 09:56 Calibration ID: 13870

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.4980 0.7601	0.5685	0.6777	0.6994	0.7060	Ave		0.6516				15.0		15.0			
o-Xylene	0.4399 0.7170	0.5159	0.6056	0.6599	0.6586	Lin1	-0.201	0.6960							0.9970		0.9900
Styrene	0.6664 1.2379	0.7955	0.9652	1.0667	1.1075	Lin1	-0.439	1.1834							0.9950		0.9900
Bromoform	0.0917 0.1458	0.1090	0.1128	0.1192	0.1295	Lin1	-0.042	0.1379			0.1000				0.9930		0.9900
Isopropylbenzene	1.1310 1.9109	1.3391	1.5535	1.6592	1.7463	Lin1	-0.588	1.8386							0.9960		0.9900
1,1,2,2-Tetrachloroethane	0.6877 0.5885	0.5898	0.5860	0.5718	0.5793	Ave		0.6005			0.3000	7.2		15.0			
Bromobenzene	0.6133 0.6989	0.6441	0.6628	0.6814	0.6759	Ave		0.6627				4.6		15.0			
1,2,3-Trichloropropane	0.2156 0.1843	0.1873	0.1848	0.1976	0.1883	Ave		0.1930				6.3		15.0			
trans-1,4-Dichloro-2-butene	0.1351 0.1636	0.1397	0.1339	0.1474	0.1572	Ave		0.1462				8.3		15.0			
n-Propylbenzene	0.5380 0.8382	0.6496	0.7668	0.7996	0.8024	Lin1	-0.199	0.8280							0.9990		0.9900
2-Chlorotoluene	0.5579 0.6989	0.5936	0.6635	0.6848	0.6789	Ave		0.6463				8.8		15.0			
1,3,5-Trimethylbenzene	1.4985 2.6086	1.9759	2.2827	2.4423	2.4416	Lin1	-0.725	2.5557							0.9990		0.9900
4-Chlorotoluene	0.5185 0.7734	0.6832	0.7375	0.7325	0.7310	Ave		0.6960				13.0		15.0			
tert-Butylbenzene	1.5112 2.2134	1.6417	1.9229	2.0866	2.1229	Ave		1.9165				15.0		15.0			
1,2,4-Trimethylbenzene	1.5833 2.6415	1.9557	2.4060	2.4840	2.5001	Lin1	-0.705	2.5996							0.9990		0.9900
sec-Butylbenzene	2.1024 3.2816	2.5515	2.9167	3.0538	3.1183	Ave		2.8374				15.0		15.0			
1,3-Dichlorobenzene	1.3721 1.4502	1.3633	1.3733	1.4028	1.3978	Ave		1.3932				2.3		15.0			
p-Isopropyltoluene	1.6013 2.7640	2.0382	2.3740	2.5786	2.6145	Lin1	-0.801	2.7121							0.9980		0.9900
1,4-Dichlorobenzene	1.5640 1.4729	1.4460	1.4231	1.4322	1.4237	Ave		1.4603				3.7		15.0			
n-Butylbenzene	1.7871 2.4819	1.8076	2.1369	2.2968	2.3442	Ave		2.1424				13.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 08:04 Calibration End Date: 02/26/2013 09:56 Calibration ID: 13870

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3890 1.2908	1.3100	1.3101	1.3029	1.2806	Ave		1.3139				2.9		15.0			
1,2-Dibromo-3-Chloropropane	0.0682 0.0595	0.0527	0.0548	0.0606	0.0620	Ave		0.0596				9.2		15.0			
1,3,5-Trichlorobenzene	1.0493 0.8415	0.8822	0.8959	0.9175	0.8872	Ave		0.9123				7.8		15.0			
1,2,4-Trichlorobenzene	0.7493 0.6031	0.6683	0.7152	0.7458	0.7091	Ave		0.6985				7.9		15.0			
Hexachlorobutadiene	0.5705	0.3708	0.3741	0.3571	0.3137	Lin1	0.1316	0.3222							0.9960		0.9900
Naphthalene	1.2654 1.2071	1.1433	1.3256	1.4939	1.4826	Ave		1.3197				11.0		15.0			
1,2,3-Trichlorobenzene	0.8162	0.6661	0.6809	0.6784	0.5695	Ave		0.6822				13.0		15.0			
Dibromofluoromethane (Surr)	0.2075 0.2288	0.2116	0.2204	0.2234	0.2276	Ave		0.2199				3.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2899 0.2900	0.2884	0.2946	0.2893	0.2863	Ave		0.2897				0.9		15.0			
Toluene-d8 (Surr)	0.9372 1.2814	1.0765	1.1980	1.2478	1.2422	Ave		1.1638				11.0		15.0			
4-Bromofluorobenzene (Surr)	0.3476 0.4686	0.3953	0.4320	0.4475	0.4488	Ave		0.4233				11.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 10:19 Calibration End Date: 02/26/2013 12:10 Calibration ID: 13873

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-76432/13	UXR3884.D
Level 2	STDA9 240-76432/12	UXR3883.D
Level 3	STDA9 240-76432/11	UXR3882.D
Level 4	STDA9 240-76432/10	UXR3881.D
Level 5	STDA9 240-76432/9	UXR3880.D
Level 6	STDA9 240-76432/8	UXR3879.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6402 0.6110	0.7403	0.6329	0.6275	0.6855	Ave		0.6562				7.3		15.0			
Ethyl ether	0.2406 0.2321	0.2701	0.2398	0.2325	0.2622	Ave		0.2462				6.5		15.0			
3-Chloro-1-propene	0.1124 0.1417	0.1173	0.1091	0.1216	0.1450	Ave		0.1245				12.0		15.0			
Diisopropyl ether	0.1981 0.2674	0.2359	0.2263	0.2408	0.2807	Ave		0.2416				12.0		15.0			
2-Chloro-1,3-butadiene	0.3475 0.4514	0.4267	0.3930	0.4272	0.4827	Ave		0.4214				11.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.4838 0.6564	0.5992	0.5535	0.6038	0.6972	Ave		0.5990				13.0		15.0			
Ethyl acetate	0.1501 0.1700	0.1762	0.1495	0.1590	0.1927	Ave		0.1663				10.0		15.0			
~~Propionitrile~~	0.0293 0.0318	0.0355	0.0310	0.0329	0.0379	Ave		~~0.0331~~				9.5		15.0			
Methacrylonitrile	0.1154 0.1290	0.1307	0.1145	0.1198	0.1436	Ave		0.1255				8.9		15.0			
~~Isobutyl alcohol~~	0.0083 0.0074	0.0075	0.0072	0.0072	0.0084	Ave		~~0.0076~~				6.9		15.0			
Tert-amyl-methyl ether (TAME)	0.3896 0.5289	0.4404	0.4106	0.4771	0.5596	Ave		0.4677				14.0		15.0			
n-Heptane	0.0490 0.0758	0.0644	0.0670	0.0721	0.0853	Lin1	-0.032	0.0791							0.9950		0.9900
~~n-Butanol~~	0.0046 0.0055	0.0049	0.0045	0.0047	0.0057	Ave		~~0.0050~~				11.0		15.0			
Methyl methacrylate	0.1061 0.1533	0.1270	0.1153	0.1310	0.1589	Lin1	-0.069	0.1535							0.9940		0.9900
~~2-Nitropropane~~	0.0281 0.0319	0.0266	0.0221	0.0244	0.0315	Ave		~~0.0274~~				14.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 76432

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/26/2013 10:19 Calibration End Date: 02/26/2013 12:10 Calibration ID: 13873

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
~~Cyclohexanone~~	0.0218 0.0407	0.0249	0.0231	0.0270	0.0401	Qua	-0.444	~~0.0370~~	0						0.9950		0.9900
1,2,3-Trimethylbenzene	1.7726 2.8456	2.0480	2.3046	2.5622	3.0445	Lin1	-1.536	2.9095							0.9960		0.9900
2-Methylnaphthalene	0.4251	0.3953	0.3380	0.3477	0.3762	Ave		0.3765				9.4		15.0			
n-Butyl acetate	0.0852 0.1761	0.1056	0.1069	0.1327	0.1784	Qua	-0.424	0.1752	0.0001						0.9960		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-76432/14 Calibration Date: 02/26/2013 12:33

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR3885.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1833	0.1913		1.00	0.0100	4.4	50.0
Chloromethane	Ave	0.3234	0.3689	0.1000	1.00	0.0100	14.1	50.0
Vinyl chloride	Ave	0.3618	0.3886		1.00	0.0100	7.4	20.0
Bromomethane	Lin1		0.1890		1.00	0.0100	-10.9	50.0
Chloroethane	Ave	0.2763	0.2675		1.00	0.0100	-3.2	50.0
Trichlorofluoromethane	Ave	0.4114	0.3901		1.00	0.0100	-5.2	50.0
Acrolein	Ave	0.0387	0.0493		20.0	0.0300	27.4	50.0
1,1-Dichloroethene	Ave	0.2677	0.2505		1.00	0.0100	-6.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1940	0.1867		1.00	0.0100	-3.8	50.0
Acetone	Lin1		0.0642		10.0	0.0200	-1.4	50.0
Iodomethane	Ave	0.3965	0.3844		1.00	0.0100	-3.1	50.0
Carbon disulfide	Ave	0.8070	0.7531		1.00	0.0100	-6.7	50.0
Acetonitrile	Ave	0.0317	0.0334		20.0	0.0300	5.4	50.0
Methyl acetate	Ave	0.1663	0.1654		10.0	0.0100	-0.5	50.0
Methylene Chloride	Lin1		0.3012		1.00	0.0100	-5.2	50.0
tert-Butyl alcohol	Ave	0.0103	0.0104		50.0	0.200	1.2	50.0
Acrylonitrile	Ave	0.0947	0.0971		20.0	0.0300	2.5	50.0
Methyl tert-butyl ether	Ave	0.5842	0.5724		1.00	0.0100	-2.0	50.0
trans-1,2-Dichloroethene	Ave	0.2966	0.2847		1.00	0.0100	-4.0	50.0
Hexane	Ave	0.0718	0.0686		1.00	0.0100	-4.5	20.0
1,1-Dichloroethane	Ave	0.5137	0.5032	0.1000	1.00	0.0100	-2.0	50.0
Vinyl acetate	Lin1		0.0386		2.00	0.0100	-0.9	50.0
2,2-Dichloropropane	Ave	0.2004	0.1852		1.00	0.0100	-7.6	50.0
cis-1,2-Dichloroethene	Ave	0.3095	0.2951		1.00	0.0100	-4.6	50.0
2-Butanone	Ave	0.0846	0.0812		10.0	0.0200	-4.0	50.0
Bromochloromethane	Ave	0.1344	0.1345		1.00	0.0100	0.1	50.0
Tetrahydrofuran	Ave	0.0532	0.0530		5.00	0.0100	-0.5	50.0
Chloroform	Ave	0.4779	0.4634		1.00	0.0100	-3.0	20.0
1,1,1-Trichloroethane	Ave	0.3259	0.3040		1.00	0.0100	-6.7	50.0
Cyclohexane	Ave	0.4971	0.4490		1.00	0.0100	-9.7	50.0
1,1-Dichloropropene	Ave	0.3793	0.3649		1.00	0.0100	-3.8	50.0
Carbon tetrachloride	Ave	0.2826	0.2664		1.00	0.0100	-5.7	50.0
Benzene	Ave	1.231	1.191		1.00	0.0100	-3.3	50.0
1,2-Dichloroethane	Ave	0.3836	0.3741		1.00	0.0100	-2.5	50.0
Trichloroethene	Ave	0.2819	0.2643		1.00	0.0100	-6.3	50.0
Methylcyclohexane	Ave	0.4823	0.4220		1.00	0.0100	-12.5	50.0
1,2-Dichloropropane	Ave	0.2758	0.2614		1.00	0.0100	-5.2	20.0
Dibromomethane	Ave	0.1491	0.1492		1.00	0.0100	0.0	50.0
Bromodichloromethane	Ave	0.2821	0.2746		1.00	0.0100	-2.7	50.0
2-Chloroethyl vinyl ether	Lin1		0.1090		10.0	0.0100	-17.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-76432/14 Calibration Date: 02/26/2013 12:33

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR3885.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.2878		1.00	0.0100	-18.8	50.0
4-Methyl-2-pentanone	Lin1		0.1540		10.0	0.0200	-9.6	50.0
Toluene	Ave	1.502	1.511		1.00	0.0100	0.6	20.0
trans-1,3-Dichloropropene	Lin1		0.3107		1.00	0.0100	-13.4	50.0
1,1,2-Trichloroethane	Ave	0.2638	0.2695		1.00	0.0100	2.2	50.0
Tetrachloroethene	Ave	0.2740	0.2645		1.00	0.0100	-3.5	50.0
1,3-Dichloropropane	Ave	0.5073	0.4980		1.00	0.0100	-1.8	50.0
2-Hexanone	Lin1		0.1309		10.0	0.0200	-5.3	50.0
Dibromochloromethane	Ave	0.2180	0.2160		1.00	0.0100	-1.0	50.0
1,2-Dibromoethane	Ave	0.2423	0.2426		1.00	0.0100	0.1	50.0
Chlorobenzene	Ave	0.998	0.9652	0.3000	1.00	0.0100	-3.3	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2818	0.2697		1.00	0.0100	-4.3	50.0
Ethylbenzene	Ave	0.5077	0.5100		1.00	0.0100	0.5	20.0
m-Xylene & p-Xylene	Ave	0.6516	0.6736		2.00	0.0200	3.4	50.0
o-Xylene	Lin1		0.6514		1.00	0.0100	-3.5	50.0
Styrene	Lin1		1.051		1.00	0.0100	-7.5	50.0
Bromoform	Lin1		0.1158	0.1000	1.00	0.0100	-13.0	50.0
Isopropylbenzene	Lin1		1.631		1.00	0.0100	-8.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6005	0.5693	0.3000	1.00	0.0100	-5.2	50.0
Bromobenzene	Ave	0.6627	0.6443		1.00	0.0100	-2.8	50.0
1,2,3-Trichloropropane	Ave	0.1930	0.1866		1.00	0.0100	-3.3	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1462	0.1467		1.00	0.0200	0.4	50.0
n-Propylbenzene	Lin1		0.7810		1.00	0.0100	-3.3	50.0
2-Chlorotoluene	Ave	0.6463	0.6447		1.00	0.0100	-0.2	50.0
1,3,5-Trimethylbenzene	Lin1		2.289		1.00	0.0100	-7.6	50.0
4-Chlorotoluene	Ave	0.6960	0.6973		1.00	0.0100	0.2	50.0
tert-Butylbenzene	Ave	1.916	1.908		1.00	0.0100	-0.4	50.0
1,2,4-Trimethylbenzene	Lin1		2.353		1.00	0.0100	-6.8	50.0
sec-Butylbenzene	Ave	2.837	2.808		1.00	0.0100	-1.0	50.0
1,3-Dichlorobenzene	Ave	1.393	1.334		1.00	0.0100	-4.2	50.0
p-Isopropyltoluene	Lin1		2.484		1.00	0.0100	-5.5	50.0
1,4-Dichlorobenzene	Ave	1.460	1.361		1.00	0.0100	-6.8	50.0
n-Butylbenzene	Ave	2.142	2.172		1.00	0.0100	1.4	50.0
1,2-Dichlorobenzene	Ave	1.314	1.239		1.00	0.0100	-5.7	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0596	0.0563		2.00	0.0100	-5.6	50.0
1,2,4-Trichlorobenzene	Ave	0.6985	0.5708		1.00	0.0100	-18.3	50.0
Hexachlorobutadiene	Lin1		0.2772		1.00	0.0100	-18.1	50.0
Naphthalene	Ave	1.320	1.114		1.00	0.0100	-15.6	50.0
1,2,3-Trichlorobenzene	Ave	0.6822	0.4987		1.00	0.0100	-26.9	50.0
Dibromofluoromethane (Surr)	Ave	0.2199	0.2117		0.00858	0.00891	-3.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2897	0.2850		0.00876	0.00891	-1.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-76432/14 Calibration Date: 02/26/2013 12:33

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR3885.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.164	1.194		0.00914	0.00891	2.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4233	0.4569		0.00962	0.00891	7.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-76432/14 Calibration Date: 02/26/2013 12:33

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 12:10

Lab File ID: UXR3885.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2462	0.2497		2.00	0.0100	1.4	50.0
Diisopropyl ether	Ave	0.2416	0.2327		10.0	0.0100	-3.7	50.0
Isobutyl alcohol	Ave	0.0076	0.0075		50.0	0.500	-2.1	50.0
Cyclohexanone	Qua		0.0102		20.0	0.200	-67.3*	50.0
1,2,3-Trimethylbenzene	Lin1		2.352		0.00861	0.0100	-13.9	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: BFB156.D BFB Injection Date: 04/03/2013

Instrument ID: A3UX17 BFB Injection Time: 12:17

Analysis Batch No.: 80415

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.9	
75	30.0 - 60.0 % of mass 95	46.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	73.5	
175	5.0 - 9.0 % of mass 174	5.0	(6.9)1
176	95.0 - 101.0 % of mass 174	71.2	(96.8)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-80415/2	UXR4822.D	04/03/2013	12:40
	CCV 240-80415/3	UXR4823.D	04/03/2013	13:02
	LCS 240-80415/4	UXR4824.D	04/03/2013	13:24
	MB 240-80415/6	UXR4826.D	04/03/2013	14:09
MRC-MW29A-032613	240-22475-4	UXR4827.D	04/03/2013	14:43
MRC-MW-53A-032613	240-22475-6	UXR4828.D	04/03/2013	15:05
TB-032613	240-22475-1	UXR4829.D	04/03/2013	15:27
MRC-MW37A-032613	240-22475-3	UXR4831.D	04/03/2013	16:12
MRC-MW-53B-032613	240-22475-7	UXR4832.D	04/03/2013	16:35
MRC-MW-110A-032613	240-22475-8	UXR4833.D	04/03/2013	16:57
MRC-MW-110B-032613	240-22475-9	UXR4834.D	04/03/2013	17:20

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80415/2 Calibration Date: 04/03/2013 12:40

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1833	0.3254		1.00	0.0100	77.5*	50.0
Chloromethane	Ave	0.3234	0.3767	0.1000	1.00	0.0100	16.5	50.0
Vinyl chloride	Ave	0.3618	0.3520		1.00	0.0100	-2.7	20.0
Bromomethane	Lin1		0.1773		1.00	0.0100	-16.5	50.0
Chloroethane	Ave	0.2763	0.2148		1.00	0.0100	-22.3	50.0
Trichlorofluoromethane	Ave	0.4114	0.3831		1.00	0.0100	-6.9	50.0
Acrolein	Ave	0.0387	0.0493		20.0	0.100	27.6	50.0
1,1-Dichloroethene	Ave	0.2677	0.3085		1.00	0.0100	15.2	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1940	0.2325		1.00	0.0100	19.8	50.0
Acetone	Lin1		0.0748		10.0	0.0200	15.3	50.0
Iodomethane	Ave	0.3965	0.4758		1.00	0.0100	20.0	50.0
Carbon disulfide	Ave	0.8070	0.9552		1.00	0.0100	18.4	50.0
Acetonitrile	Ave	0.0317	0.0358		20.0	0.100	12.8	50.0
Methyl acetate	Ave	0.1663	0.1840		10.0	0.0200	10.6	50.0
Methylene Chloride	Lin1		0.3783		1.00	0.0100	20.2	50.0
tert-Butyl alcohol	Ave	0.0103	0.0132		50.0	0.200	28.0	50.0
Acrylonitrile	Ave	0.0947	0.1100		20.0	0.0200	16.1	50.0
Methyl tert-butyl ether	Ave	0.5842	0.7430		1.00	0.0100	27.2	50.0
trans-1,2-Dichloroethene	Ave	0.2966	0.3505		1.00	0.0100	18.1	50.0
Hexane	Ave	0.0718	0.0824		1.00	0.0100	14.7	20.0
1,1-Dichloroethane	Ave	0.5137	0.5747	0.1000	1.00	0.0100	11.9	50.0
Vinyl acetate	Lin1		0.0474		2.00	0.0100	20.9	50.0
2,2-Dichloropropane	Ave	0.2004	0.2753		1.00	0.0100	37.4	50.0
2-Butanone	Ave	0.0846	0.0947		10.0	0.0200	12.0	50.0
cis-1,2-Dichloroethene	Ave	0.3095	0.3642		1.00	0.0100	17.7	50.0
Bromochloromethane	Ave	0.1344	0.1599		1.00	0.0100	19.0	50.0
Tetrahydrofuran	Ave	0.0532	0.0621		5.00	0.0100	16.7	50.0
Chloroform	Ave	0.4779	0.5286		1.00	0.0100	10.6	20.0
1,1,1-Trichloroethane	Ave	0.3259	0.4030		1.00	0.0100	23.6	50.0
Cyclohexane	Ave	0.4971	0.6054		1.00	0.0100	21.8	50.0
1,1-Dichloropropene	Ave	0.3793	0.4278		1.00	0.0100	12.8	50.0
Carbon tetrachloride	Ave	0.2826	0.3530		1.00	0.0100	24.9	50.0
Benzene	Ave	1.231	1.347		1.00	0.0100	9.5	50.0
1,2-Dichloroethane	Ave	0.3836	0.3682		1.00	0.0100	-4.0	50.0
Trichloroethene	Ave	0.2819	0.3195		1.00	0.0100	13.3	50.0
Methylcyclohexane	Ave	0.4823	0.5724		1.00	0.0100	18.7	50.0
1,2-Dichloropropane	Ave	0.2758	0.3092		1.00	0.0100	12.1	20.0
1,4-Dioxane	Ave	0.0021	0.0025		50.0	0.500	19.0	50.0
Dibromomethane	Ave	0.1491	0.1590		1.00	0.0100	6.7	50.0
Bromodichloromethane	Ave	0.2821	0.3158		1.00	0.0100	11.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80415/2 Calibration Date: 04/03/2013 12:40

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.1468		10.0	0.0200	5.3	50.0
cis-1,3-Dichloropropene	Lin1		0.3760		1.00	0.0100	5.1	50.0
4-Methyl-2-pentanone	Lin1		0.1885		10.0	0.0200	9.9	50.0
Toluene	Ave	1.502	1.545		1.00	0.0100	2.9	20.0
trans-1,3-Dichloropropene	Lin1		0.3411		1.00	0.0100	-5.3	50.0
Ethyl methacrylate	Lin1		0.3542		1.00	0.0100	7.0	50.0
1,1,2-Trichloroethane	Ave	0.2638	0.2736		1.00	0.0100	3.7	50.0
Tetrachloroethene	Ave	0.2740	0.3105		1.00	0.0100	13.3	50.0
1,3-Dichloropropane	Ave	0.5073	0.5173		1.00	0.0100	2.0	50.0
2-Hexanone	Lin1		0.1457		10.0	0.0200	5.1	50.0
Dibromochloromethane	Ave	0.2180	0.2346		1.00	0.0100	7.6	50.0
1,2-Dibromoethane	Ave	0.2423	0.2676		1.00	0.0100	10.4	50.0
Chlorobenzene	Ave	0.998	1.022	0.3000	1.00	0.0100	2.4	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2818	0.3083		1.00	0.0100	9.4	50.0
Ethylbenzene	Ave	0.5077	0.5506		1.00	0.0100	8.5	20.0
m-Xylene & p-Xylene	Ave	0.6516	0.7150		2.00	0.0200	9.7	50.0
o-Xylene	Lin1		0.6658		1.00	0.0100	-1.4	50.0
Styrene	Lin1		1.120		1.00	0.0100	-1.7	50.0
Bromoform	Lin1		0.1274	0.1000	1.00	0.0100	-4.6	50.0
Isopropylbenzene	Lin1		1.670		1.00	0.0100	-6.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6005	0.5869	0.3000	1.00	0.0100	-2.3	50.0
Bromobenzene	Ave	0.6627	0.7330		1.00	0.0100	10.6	50.0
1,2,3-Trichloropropane	Ave	0.1930	0.1884		1.00	0.0100	-2.4	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1462	0.1170		1.00	0.0100	-19.9	50.0
n-Propylbenzene	Lin1		0.7920		1.00	0.0100	-1.9	50.0
2-Chlorotoluene	Ave	0.6463	0.6845		1.00	0.0100	5.9	50.0
1,3,5-Trimethylbenzene	Lin1		2.393		1.00	0.0100	-3.5	50.0
4-Chlorotoluene	Ave	0.6960	0.7394		1.00	0.0100	6.2	50.0
tert-Butylbenzene	Ave	1.916	2.030		1.00	0.0100	5.9	50.0
1,2,4-Trimethylbenzene	Lin1		2.460		1.00	0.0100	-2.6	50.0
sec-Butylbenzene	Ave	2.837	2.890		1.00	0.0100	1.9	50.0
1,3-Dichlorobenzene	Ave	1.393	1.424		1.00	0.0100	2.2	50.0
p-Isopropyltoluene	Lin1		2.465		1.00	0.0100	-6.2	50.0
1,4-Dichlorobenzene	Ave	1.460	1.466		1.00	0.0100	0.4	50.0
n-Butylbenzene	Ave	2.142	2.064		1.00	0.0100	-3.7	50.0
1,2-Dichlorobenzene	Ave	1.314	1.324		1.00	0.0100	0.8	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0596	0.0667		2.00	0.0100	11.8	50.0
1,3,5-Trichlorobenzene	Ave	0.9123	0.9401		1.00	0.0100	3.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6985	0.7148		1.00	0.0100	2.3	50.0
Hexachlorobutadiene	Lin1		0.3872		1.00	0.0100	16.1	50.0
Naphthalene	Ave	1.320	1.287		1.00	0.0100	-2.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80415/2 Calibration Date: 04/03/2013 12:40

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6822	0.5601		1.00	0.0100	-17.9	50.0
Dibromofluoromethane (Surr)	Ave	0.2199	0.2228		0.00903	0.00891	1.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2897	0.2560		0.00787	0.00891	-11.7	50.0
Toluene-d8 (Surr)	Ave	1.164	1.103		0.00845	0.00891	-5.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4233	0.4264		0.00898	0.00891	0.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCV 240-80415/3 Calibration Date: 04/03/2013 13:02

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 12:10

Lab File ID: UXR4823.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.6562	0.4416		2.00	0.0100	-32.7	50.0
Ethyl ether	Ave	0.2462	0.2449		2.00	0.0100	-0.5	50.0
3-Chloro-1-propene	Ave	0.1245	0.1468		2.00	0.0100	17.9	50.0
Diisopropyl ether	Ave	0.2416	0.2614		10.0	0.0500	8.2	50.0
2-Chloro-1,3-butadiene	Ave	0.4214	0.4240		2.00	0.0100	0.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.5990	0.7082		5.00	0.0100	18.2	50.0
Ethyl acetate	Ave	0.1663	0.1820		4.00	0.0200	9.5	50.0
Propionitrile	Ave	0.0331	0.0328		4.00	0.0200	-0.8	50.0
Methacrylonitrile	Ave	0.1255	0.1282		2.00	0.0100	2.2	50.0
Isobutyl alcohol	Ave	0.0076	0.0068		50.0	0.200	-10.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4677	0.5965		5.00	0.0100	27.5	50.0
n-Heptane	Lin1		0.0811		1.00	0.0100	6.7	50.0
n-Butanol	Ave	0.0050	0.0053		50.0	0.200	5.6	50.0
Methyl methacrylate	Lin1		0.1586		2.00	0.0100	7.9	50.0
2-Nitropropane	Ave	0.0274	0.0281		2.00	0.0200	2.5	50.0
Cyclohexanone	Qua		0.0788		20.0	0.100	109.9*	50.0
1,2,3-Trimethylbenzene	Lin1		2.401		0.00878	0.0100	-12.2	50.0
2-Methylnaphthalene	Ave	0.3765	0.0626		5.00	0.0200	83.4*	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: BFB159.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX17 BFB Injection Time: 10:42

Analysis Batch No.: 80568

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.6	
75	30.0 - 60.0 % of mass 95	45.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	0.6	(0.7)1
174	50.0 - 120.00 % of mass 95	92.7	
175	5.0 - 9.0 % of mass 174	6.5	(7.1)1
176	95.0 - 101.0 % of mass 174	89.5	(96.6)1
177	5.0 - 9.0 % of mass 176	5.4	(6.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-80568/2	UXR4851.D	04/04/2013	11:32
	CCV 240-80568/3	UXR4852.D	04/04/2013	11:54
	LCS 240-80568/4	UXR4853.D	04/04/2013	12:17
	MB 240-80568/6	UXR4855.D	04/04/2013	13:01
MRC-MW72B-032613	240-22475-2	UXR4869.D	04/04/2013	18:40
	240-22543-A-1 MS	UXR4875.D	04/04/2013	20:54
	240-22543-A-1 MSD	UXR4876.D	04/04/2013	21:16

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80568/2 Calibration Date: 04/04/2013 11:32

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4851.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1833	0.3134		1.00	0.0100	71.0*	50.0
Chloromethane	Ave	0.3234	0.3413	0.1000	1.00	0.0100	5.5	50.0
Vinyl chloride	Ave	0.3618	0.3346		1.00	0.0100	-7.5	20.0
Bromomethane	Lin1		0.1698		1.00	0.0100	-20.1	50.0
Chloroethane	Ave	0.2763	0.2061		1.00	0.0100	-25.4	50.0
Trichlorofluoromethane	Ave	0.4114	0.3624		1.00	0.0100	-11.9	50.0
Acrolein	Ave	0.0387	0.0428		20.0	0.100	10.8	50.0
1,1-Dichloroethene	Ave	0.2677	0.2457		1.00	0.0100	-8.2	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1940	0.2050		1.00	0.0100	5.6	50.0
Acetone	Lin1		0.0671		10.0	0.0200	3.1	50.0
Iodomethane	Ave	0.3965	0.3838		1.00	0.0100	-3.2	50.0
Carbon disulfide	Ave	0.8070	0.7662		1.00	0.0100	-5.1	50.0
Acetonitrile	Ave	0.0317	0.0308		20.0	0.100	-2.8	50.0
Methyl acetate	Ave	0.1663	0.1646		10.0	0.0200	-1.0	50.0
Methylene Chloride	Lin1		0.3352		1.00	0.0100	6.0	50.0
tert-Butyl alcohol	Ave	0.0103	0.0112		50.0	0.200	8.9	50.0
Acrylonitrile	Ave	0.0947	0.0980		20.0	0.0200	3.4	50.0
Methyl tert-butyl ether	Ave	0.5842	0.6416		1.00	0.0100	9.8	50.0
trans-1,2-Dichloroethene	Ave	0.2966	0.3018		1.00	0.0100	1.7	50.0
Hexane	Ave	0.0718	0.0720		1.00	0.0100	0.3	20.0
1,1-Dichloroethane	Ave	0.5137	0.4973	0.1000	1.00	0.0100	-3.2	50.0
Vinyl acetate	Lin1		0.0451		2.00	0.0100	15.2	50.0
2,2-Dichloropropane	Ave	0.2004	0.2466		1.00	0.0100	23.1	50.0
2-Butanone	Ave	0.0846	0.0926		10.0	0.0200	9.5	50.0
cis-1,2-Dichloroethene	Ave	0.3095	0.3112		1.00	0.0100	0.6	50.0
Bromochloromethane	Ave	0.1344	0.1467		1.00	0.0100	9.2	50.0
Tetrahydrofuran	Ave	0.0532	0.0547		5.00	0.0100	2.8	50.0
Chloroform	Ave	0.4779	0.4721		1.00	0.0100	-1.2	20.0
1,1,1-Trichloroethane	Ave	0.3259	0.3671		1.00	0.0100	12.6	50.0
Cyclohexane	Ave	0.4971	0.5156		1.00	0.0100	3.7	50.0
1,1-Dichloropropene	Ave	0.3793	0.3808		1.00	0.0100	0.4	50.0
Carbon tetrachloride	Ave	0.2826	0.3297		1.00	0.0100	16.7	50.0
Benzene	Ave	1.231	1.195		1.00	0.0100	-2.9	50.0
1,2-Dichloroethane	Ave	0.3836	0.3272		1.00	0.0100	-14.7	50.0
Trichloroethene	Ave	0.2819	0.2940		1.00	0.0100	4.3	50.0
Methylcyclohexane	Ave	0.4823	0.5142		1.00	0.0100	6.6	50.0
1,2-Dichloropropane	Ave	0.2758	0.2829		1.00	0.0100	2.6	20.0
1,4-Dioxane	Ave	0.0021	0.0020		50.0	0.500	-5.2	50.0
Dibromomethane	Ave	0.1491	0.1415		1.00	0.0100	-5.1	50.0
Bromodichloromethane	Ave	0.2821	0.3048		1.00	0.0100	8.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80568/2 Calibration Date: 04/04/2013 11:32

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4851.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.1450		10.0	0.0200	4.1	50.0
cis-1,3-Dichloropropene	Lin1		0.3643		1.00	0.0100	1.9	50.0
4-Methyl-2-pentanone	Lin1		0.1833		10.0	0.0200	6.9	50.0
Toluene	Ave	1.502	1.424		1.00	0.0100	-5.2	20.0
trans-1,3-Dichloropropene	Lin1		0.3369		1.00	0.0100	-6.4	50.0
Ethyl methacrylate	Lin1		0.3310		1.00	0.0100	0.2	50.0
1,1,2-Trichloroethane	Ave	0.2638	0.2511		1.00	0.0100	-4.8	50.0
Tetrachloroethene	Ave	0.2740	0.2916		1.00	0.0100	6.4	50.0
1,3-Dichloropropane	Ave	0.5073	0.4720		1.00	0.0100	-6.9	50.0
2-Hexanone	Lin1		0.1360		10.0	0.0200	-1.6	50.0
Dibromochloromethane	Ave	0.2180	0.2406		1.00	0.0100	10.3	50.0
1,2-Dibromoethane	Ave	0.2423	0.2405		1.00	0.0100	-0.8	50.0
Chlorobenzene	Ave	0.998	0.9245	0.3000	1.00	0.0100	-7.4	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2818	0.2930		1.00	0.0100	4.0	50.0
Ethylbenzene	Ave	0.5077	0.4930		1.00	0.0100	-2.9	20.0
m-Xylene & p-Xylene	Ave	0.6516	0.6444		2.00	0.0200	-1.1	50.0
o-Xylene	Lin1		0.5979		1.00	0.0100	-11.2	50.0
Styrene	Lin1		0.9891		1.00	0.0100	-12.7	50.0
Bromoform	Lin1		0.1451	0.1000	1.00	0.0100	8.2	50.0
Isopropylbenzene	Lin1		1.510		1.00	0.0100	-14.7	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6005	0.5362	0.3000	1.00	0.0100	-10.7	50.0
Bromobenzene	Ave	0.6627	0.6587		1.00	0.0100	-0.6	50.0
1,2,3-Trichloropropane	Ave	0.1930	0.1705		1.00	0.0100	-11.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1462	0.1275		1.00	0.0100	-12.8	50.0
n-Propylbenzene	Lin1		0.7241		1.00	0.0100	-10.1	50.0
2-Chlorotoluene	Ave	0.6463	0.6297		1.00	0.0100	-2.6	50.0
1,3,5-Trimethylbenzene	Lin1		2.141		1.00	0.0100	-13.4	50.0
4-Chlorotoluene	Ave	0.6960	0.6673		1.00	0.0100	-4.1	50.0
tert-Butylbenzene	Ave	1.916	1.823		1.00	0.0100	-4.9	50.0
1,2,4-Trimethylbenzene	Lin1		2.211		1.00	0.0100	-12.2	50.0
sec-Butylbenzene	Ave	2.837	2.624		1.00	0.0100	-7.5	50.0
1,3-Dichlorobenzene	Ave	1.393	1.262		1.00	0.0100	-9.4	50.0
p-Isopropyltoluene	Lin1		2.233		1.00	0.0100	-14.7	50.0
1,4-Dichlorobenzene	Ave	1.460	1.299		1.00	0.0100	-11.0	50.0
n-Butylbenzene	Ave	2.142	1.885		1.00	0.0100	-12.0	50.0
1,2-Dichlorobenzene	Ave	1.314	1.196		1.00	0.0100	-9.0	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0596	0.0676		2.00	0.0100	13.4	50.0
1,3,5-Trichlorobenzene	Ave	0.9123	0.8387		1.00	0.0100	-8.1	50.0
1,2,4-Trichlorobenzene	Ave	0.6985	0.5721		1.00	0.0100	-18.1	50.0
Hexachlorobutadiene	Lin1		0.3485		1.00	0.0100	4.1	50.0
Naphthalene	Ave	1.320	1.014		1.00	0.0100	-23.2	50.0

FORM VII 8260B

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80568/2 Calibration Date: 04/04/2013 11:32

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4851.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6822	0.4137		1.00	0.0100	-39.4	50.0
Dibromofluoromethane (Surr)	Ave	0.2199	0.2138		0.00866	0.00891	-2.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2897	0.2430		0.00747	0.00891	-16.1	50.0
Toluene-d8 (Surr)	Ave	1.164	1.079		0.00826	0.00891	-7.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4233	0.3992		0.00840	0.00891	-5.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCV 240-80568/3 Calibration Date: 04/04/2013 11:54

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 10:19

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 12:10

Lab File ID: UXR4852.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.6562	0.4171		2.00	0.0100	-36.4	50.0
Ethyl ether	Ave	0.2462	0.2410		2.00	0.0100	-2.1	50.0
3-Chloro-1-propene	Ave	0.1245	0.1483		2.00	0.0100	19.1	50.0
Diisopropyl ether	Ave	0.2416	0.2548		10.0	0.0500	5.5	50.0
2-Chloro-1,3-butadiene	Ave	0.4214	0.4149		2.00	0.0100	-1.5	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.5990	0.6914		5.00	0.0100	15.4	50.0
Ethyl acetate	Ave	0.1663	0.1795		4.00	0.0200	8.0	50.0
Propionitrile	Ave	0.0331	0.0319		4.00	0.0200	-3.4	50.0
Methacrylonitrile	Ave	0.1255	0.1288		2.00	0.0100	2.7	50.0
Isobutyl alcohol	Ave	0.0076	0.0063		50.0	0.200	-17.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4677	0.5768		5.00	0.0100	23.3	50.0
n-Heptane	Lin1		0.0803		1.00	0.0100	5.7	50.0
n-Butanol	Ave	0.0050	0.0049		50.0	0.200	-1.2	50.0
Methyl methacrylate	Lin1		0.1530		2.00	0.0100	4.2	50.0
2-Nitropropane	Ave	0.0274	0.0306		2.00	0.0200	11.7	50.0
Cyclohexanone	Qua		0.0750		20.0	0.100	102.8*	50.0
1,2,3-Trimethylbenzene	Lin1		2.316		0.00849	0.0100	-15.1	50.0
2-Methylnaphthalene	Ave	0.3765	0.0508		5.00	0.0200	-86.5*	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: UXR4826.D Lab Sample ID: MB 240-80415/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX17 Date Analyzed: 04/03/2013 14:09

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80415/4	UXR4824.D	04/03/2013 13:24
MRC-MW29A-032613	240-22475-4	UXR4827.D	04/03/2013 14:43
MRC-MW-53A-032613	240-22475-6	UXR4828.D	04/03/2013 15:05
TB-032613	240-22475-1	UXR4829.D	04/03/2013 15:27
MRC-MW37A-032613	240-22475-3	UXR4831.D	04/03/2013 16:12
MRC-MW-53B-032613	240-22475-7	UXR4832.D	04/03/2013 16:35
MRC-MW-110A-032613	240-22475-8	UXR4833.D	04/03/2013 16:57
MRC-MW-110B-032613	240-22475-9	UXR4834.D	04/03/2013 17:20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80415/6

Matrix: Water | Lab File ID: UXR4826.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80415/6

Matrix: Water | Lab File ID: UXR4826.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80415/6

Matrix: Water | Lab File ID: UXR4826.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	102		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
2037-26-5	Toluene-d8 (Surr)	82		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80415/6

Matrix: Water Lab File ID: UXR4826.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/03/2013 14:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80415 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4824.D

Lab ID: LCS 240-80415/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	25.3	127	43-136	
Benzene	10.0	9.81	98	83-112	
Bromobenzene	10.0	10.2	102	76-115	
Bromochloromethane	10.0	10.4	104	77-120	
Bromodichloromethane	10.0	10.3	103	72-121	
Bromoform	10.0	8.67	87	40-131	
Bromomethane	10.0	6.00	60	11-185	
2-Butanone	20.0	23.2	116	60-126	
Carbon disulfide	10.0	9.76	98	62-142	
Carbon tetrachloride	10.0	10.9	109	66-128	
Chlorobenzene	10.0	9.16	92	85-110	
Chloroethane	10.0	6.12	61	25-153	
2-Chloroethyl vinyl ether	10.0	9.48 J	95	52-131	
Chloroform	10.0	9.62	96	79-117	
Chloromethane	10.0	8.66	87	44-126	
2-Chlorotoluene	10.0	9.51	95	76-116	
4-Chlorotoluene	10.0	9.68	97	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	9.48	95	61-115	
Dibromochloromethane	10.0	9.75	97	64-119	
1,2-Dibromo-3-Chloropropane	10.0	11.2	112	42-136	
1,2-Dibromoethane	10.0	9.83	98	79-113	
Dibromomethane	10.0	10.2	102	81-120	
1,2-Dichlorobenzene	10.0	9.11	91	81-110	
1,3-Dichlorobenzene	10.0	9.32	93	80-110	
1,4-Dichlorobenzene	10.0	8.92	89	82-110	
Dichlorodifluoromethane	10.0	9.30	93	19-129	
1,1-Dichloroethane	10.0	9.84	98	82-115	
1,2-Dichloroethane	10.0	8.80	88	71-127	
1,1-Dichloroethene	10.0	9.70	97	78-131	
1,2-Dichloropropane	10.0	10.1	101	81-115	
1,3-Dichloropropane	10.0	9.38	94	79-116	
2,2-Dichloropropane	10.0	12.0	120	50-129	
1,1-Dichloropropene	10.0	9.73	97	83-114	
Diisopropyl ether	10.0	10.2	102	77-118	
Ethylbenzene	10.0	9.53	95	83-112	
Hexachlorobutadiene	10.0	10.3	103	36-134	
2-Hexanone	20.0	20.7	104	55-133	
Isopropylbenzene	10.0	8.49	85	75-114	
Methylene Chloride	10.0	10.2	102	66-131	
4-Methyl-2-pentanone	20.0	21.3	107	63-128	
Methyl tert-butyl ether	10.0	11.3	113	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4824.D

Lab ID: LCS 240-80415/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.3	96	83-113	
Naphthalene	10.0	8.83	88	32-141	
n-Butylbenzene	10.0	9.01	90	66-125	
n-Propylbenzene	10.0	9.34	93	74-121	
o-Xylene	10.0	8.74	87	83-113	
p-Isopropyltoluene	10.0	8.91	89	74-120	
sec-Butylbenzene	10.0	9.31	93	70-117	
Styrene	10.0	8.86	89	79-114	
tert-Butyl alcohol	200	248	124	70-130	
tert-Butylbenzene	10.0	9.61	96	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.81	98	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.82	88	68-118	
Tetrachloroethene	10.0	10.1	101	79-114	
Toluene	10.0	9.21	92	84-111	
trans-1,2-Dichloroethene	10.0	10.1	101	83-117	
trans-1,3-Dichloropropene	10.0	8.82	88	58-117	
1,2,3-Trichlorobenzene	10.0	7.38	74	54-126	
1,2,4-Trichlorobenzene	10.0	8.62	86	48-135	
1,1,1-Trichloroethane	10.0	10.6	106	74-118	
Trichloroethene	10.0	10.4	104	76-117	
Trichlorofluoromethane	10.0	7.70	77	49-157	
1,2,3-Trichloropropane	10.0	9.08	91	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.3	113	74-151	
1,2,3-Trimethylbenzene	10.0	8.16	82	70-130	
1,2,4-Trimethylbenzene	10.0	8.83	88	76-120	
Vinyl acetate	10.0	8.81	88	46-161	
Vinyl chloride	10.0	7.29	73	53-127	
Xylenes, Total	30.0	28.0	93	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: UXR4855.D Lab Sample ID: MB 240-80568/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX17 Date Analyzed: 04/04/2013 13:01

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80568/4	UXR4853.D	04/04/2013 12:17
MRC-MW72B-032613	240-22475-2	UXR4869.D	04/04/2013 18:40
	240-22543-A-1 MS	UXR4875.D	04/04/2013 20:54
	240-22543-A-1 MSD	UXR4876.D	04/04/2013 21:16

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80568/6

Matrix: Water | Lab File ID: UXR4855.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 13:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80568 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80568/6

Matrix: Water | Lab File ID: UXR4855.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 13:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80568 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	0.396	J	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80568/6

Matrix: Water | Lab File ID: UXR4855.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 13:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80568 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80568/6

Matrix: Water Lab File ID: UXR4855.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 13:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80568 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4853.D

Lab ID: LCS 240-80568/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	20.6	103	43-136	
Benzene	10.0	10.1	101	83-112	
Bromobenzene	10.0	10.4	104	76-115	
Bromochloromethane	10.0	11.0	110	77-120	
Bromodichloromethane	10.0	11.2	112	72-121	
Bromoform	10.0	10.8	108	40-131	
Bromomethane	10.0	6.07	61	11-185	
2-Butanone	20.0	22.3	112	60-126	
Carbon disulfide	10.0	10.5	105	62-142	
Carbon tetrachloride	10.0	11.6	116	66-128	
Chlorobenzene	10.0	9.46	95	85-110	
Chloroethane	10.0	6.37	64	25-153	
2-Chloroethyl vinyl ether	10.0	10.1	101	52-131	
Chloroform	10.0	9.92	99	79-117	
Chloromethane	10.0	8.62	86	44-126	
2-Chlorotoluene	10.0	9.76	98	76-116	
4-Chlorotoluene	10.0	9.60	96	77-115	
cis-1,2-Dichloroethene	10.0	10.3	103	80-113	
cis-1,3-Dichloropropene	10.0	10.1	101	61-115	
Dibromochloromethane	10.0	10.8	108	64-119	
1,2-Dibromo-3-Chloropropane	10.0	12.6	126	42-136	
1,2-Dibromoethane	10.0	10.4	104	79-113	
Dibromomethane	10.0	10.4	104	81-120	
1,2-Dichlorobenzene	10.0	9.35	94	81-110	
1,3-Dichlorobenzene	10.0	9.56	96	80-110	
1,4-Dichlorobenzene	10.0	9.17	92	82-110	
Dichlorodifluoromethane	10.0	8.75	87	19-129	
1,1-Dichloroethane	10.0	10.2	102	82-115	
1,2-Dichloroethane	10.0	9.00	90	71-127	
1,1-Dichloroethene	10.0	9.92	99	78-131	
1,2-Dichloropropane	10.0	10.5	105	81-115	
1,3-Dichloropropane	10.0	9.71	97	79-116	
2,2-Dichloropropane	10.0	12.7	127	50-129	
1,1-Dichloropropene	10.0	10.0	100	83-114	
Diisopropyl ether	10.0	10.7	107	77-118	
Ethylbenzene	10.0	9.97	100	83-112	
Hexachlorobutadiene	10.0	10.2	102	36-134	
2-Hexanone	20.0	20.6	103	55-133	
Isopropylbenzene	10.0	8.60	86	75-114	
Methylene Chloride	10.0	11.0	110	66-131	
4-Methyl-2-pentanone	20.0	22.1	111	63-128	
Methyl tert-butyl ether	10.0	11.6	116	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4853.D

Lab ID: LCS 240-80568/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.9	100	83-113	
Naphthalene	10.0	9.00	90	32-141	
n-Butylbenzene	10.0	9.07	91	66-125	
n-Propylbenzene	10.0	9.36	94	74-121	
o-Xylene	10.0	9.01	90	83-113	
p-Isopropyltoluene	10.0	8.98	90	74-120	
sec-Butylbenzene	10.0	9.44	94	70-117	
Styrene	10.0	9.08	91	79-114	
tert-Butyl alcohol	200	257	129	70-130	
tert-Butylbenzene	10.0	9.70	97	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.4	104	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.30	93	68-118	
Tetrachloroethene	10.0	10.5	105	79-114	
Toluene	10.0	9.52	95	84-111	
trans-1,2-Dichloroethene	10.0	10.5	105	83-117	
trans-1,3-Dichloropropene	10.0	9.50	95	58-117	
1,2,3-Trichlorobenzene	10.0	7.42	74	54-126	
1,2,4-Trichlorobenzene	10.0	8.85	88	48-135	
1,1,1-Trichloroethane	10.0	11.1	111	74-118	
Trichloroethene	10.0	10.8	108	76-117	
Trichlorofluoromethane	10.0	7.67	77	49-157	
1,2,3-Trichloropropane	10.0	9.84	98	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.7	117	74-151	
1,2,3-Trimethylbenzene	10.0	8.29	83	70-130	
1,2,4-Trimethylbenzene	10.0	8.94	89	76-120	
Vinyl acetate	10.0	10.3	103	46-161	
Vinyl chloride	10.0	7.41	74	53-127	
Xylenes, Total	30.0	28.9	96	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4875.D

Lab ID: 240-22543-A-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	100	200	211	9	33-145	F
Benzene	50.0	5.0 U	57.2	114	72-121	
Bromobenzene	50.0	5.0 U	62.8	126	71-116	F
Bromochloromethane	50.0	5.0 U	63.9	128	73-121	F
Bromodichloromethane	50.0	5.0 U	61.7	123	67-120	F
Bromoform	50.0	5.0 U	54.4	109	32-128	
Bromomethane	50.0	5.0 U	34.2	68	10-186	
2-Butanone	100	10 J	109	98	54-129	
Carbon disulfide	50.0	5.0 U	62.4	125	57-147	
Carbon tetrachloride	50.0	5.0 U	64.8	130	59-129	F
Chlorobenzene	50.0	5.0 U	52.8	106	80-110	
Chloroethane	50.0	5.0 U	36.5	73	21-165	
2-Chloroethyl vinyl ether	50.0	50 U	50 U	0	10-150	F
Chloroform	50.0	5.0 U	58.6	117	76-118	
Chloromethane	50.0	5.0 U	45.5	91	33-132	
2-Chlorotoluene	50.0	5.0 U	57.6	115	69-117	
4-Chlorotoluene	50.0	5.0 U	58.2	116	71-116	
cis-1,2-Dichloroethene	50.0	5.0 U	59.4	119	70-120	
cis-1,3-Dichloropropene	50.0	5.0 U	49.6	99	51-110	
Dibromochloromethane	50.0	5.0 U	60.3	121	56-118	F
1,2-Dibromo-3-Chloropropane	50.0	25 U	61.9	124	32-139	
1,2-Dibromoethane	50.0	5.0 U	56.6	113	74-113	
Dibromomethane	50.0	5.0 U	55.5	111	77-121	
1,2-Dichlorobenzene	50.0	5.0 U	50.7	101	75-111	
1,3-Dichlorobenzene	50.0	5.0 U	52.7	105	73-110	
1,4-Dichlorobenzene	50.0	5.0 U	50.5	101	75-110	
Dichlorodifluoromethane	50.0	5.0 U	38.7	77	17-128	
1,1-Dichloroethane	50.0	5.0 U	59.5	119	79-116	F
1,2-Dichloroethane	50.0	5.0 U	50.2	100	68-129	
1,1-Dichloroethene	50.0	5.0 U	57.1	114	74-135	
1,2-Dichloropropane	50.0	5.0 U	59.2	118	78-115	F
1,3-Dichloropropane	50.0	5.0 U	52.4	105	74-118	
2,2-Dichloropropane	50.0	5.0 U	67.1	134	38-127	F
1,1-Dichloropropene	50.0	5.0 U	58.3	117	80-114	F
Diisopropyl ether	50.0	25 U	62.0	124	73-118	F
Ethylbenzene	50.0	5.0 U	54.2	108	75-116	
Hexachlorobutadiene	50.0	5.0 U	55.2	110	27-132	
2-Hexanone	100	25 U	94.6	95	47-139	
Isopropylbenzene	50.0	5.0 U	44.7	89	68-116	
Methylene Chloride	50.0	1.7 J	61.8	124	63-128	
4-Methyl-2-pentanone	100	4.5 J	98.8	94	56-131	
Methyl tert-butyl ether	50.0	5.0 U	62.4	125	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4875.D

Lab ID: 240-22543-A-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	100	10 U	109	109	75-117	
Naphthalene	50.0	5.0 U	52.3	105	15-158	
n-Butylbenzene	50.0	5.0 U	45.4	91	56-127	
n-Propylbenzene	50.0	5.0 U	54.6	109	64-124	
o-Xylene	50.0	5.0 U	48.1	96	76-116	
p-Isopropyltoluene	50.0	5.0 U	46.6	93	64-122	
sec-Butylbenzene	50.0	5.0 U	51.5	103	60-119	
Styrene	50.0	5.0 U	48.9	98	71-117	
tert-Butyl alcohol	1000	100 U	596	60	70-130	F
tert-Butylbenzene	50.0	5.0 U	54.9	110	61-119	
1,1,1,2-Tetrachloroethane	50.0	5.0 U	57.1	114	64-118	
1,1,2,2-Tetrachloroethane	50.0	5.0 U	54.4	109	63-122	
Tetrachloroethene	50.0	5.0 U	58.8	118	70-117	F
Toluene	50.0	5.0 U	53.2	106	78-114	
trans-1,2-Dichloroethene	50.0	5.0 U	59.6	119	80-119	
trans-1,3-Dichloropropene	50.0	5.0 U	49.2	98	46-116	
1,2,3-Trichlorobenzene	50.0	5.0 U	47.4	95	45-129	
1,2,4-Trichlorobenzene	50.0	5.0 U	48.5	97	38-138	
1,1,1-Trichloroethane	50.0	5.0 U	63.5	127	68-121	F
Trichloroethene	50.0	5.0 U	59.5	119	66-120	
Trichlorofluoromethane	50.0	5.0 U	41.8	84	46-157	
1,2,3-Trichloropropane	50.0	5.0 U	54.2	108	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	50.0	5.0 U	58.7	117	70-152	
1,2,3-Trimethylbenzene	50.0	25 U	44.1	88	70-130	
1,2,4-Trimethylbenzene	50.0	5.0 U	48.3	97	67-124	
Vinyl acetate	50.0	10 U	58.0	116	43-157	
Vinyl chloride	50.0	5.0 U	41.6	83	49-130	
Xylenes, Total	150	10 U	157	105	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4876.D

Lab ID: 240-22543-A-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	100	232	30	9	30	33-145	F
Benzene	50.0	53.7	107	6	30	72-121	
Bromobenzene	50.0	61.4	123	2	30	71-116	F
Bromochloromethane	50.0	59.9	120	6	30	73-121	
Bromodichloromethane	50.0	56.6	113	9	30	67-120	
Bromoform	50.0	52.4	105	4	30	32-128	
Bromomethane	50.0	33.0	66	4	30	10-186	
2-Butanone	100	102	92	6	30	54-129	
Carbon disulfide	50.0	58.4	117	7	30	57-147	
Carbon tetrachloride	50.0	60.7	121	7	30	59-129	
Chlorobenzene	50.0	50.2	100	5	30	80-110	
Chloroethane	50.0	35.2	70	4	30	21-165	
2-Chloroethyl vinyl ether	50.0	50 U	0	NC	30	10-150	F
Chloroform	50.0	54.6	109	7	30	76-118	
Chloromethane	50.0	43.0	86	5	30	33-132	
2-Chlorotoluene	50.0	55.7	111	3	30	69-117	
4-Chlorotoluene	50.0	55.8	112	4	30	71-116	
cis-1,2-Dichloroethene	50.0	56.7	113	5	30	70-120	
cis-1,3-Dichloropropene	50.0	47.0	94	5	30	51-110	
Dibromochloromethane	50.0	58.7	117	3	30	56-118	
1,2-Dibromo-3-Chloropropane	50.0	60.1	120	3	30	32-139	
1,2-Dibromoethane	50.0	55.0	110	3	30	74-113	
Dibromomethane	50.0	53.4	107	4	30	77-121	
1,2-Dichlorobenzene	50.0	46.9	94	8	30	75-111	
1,3-Dichlorobenzene	50.0	49.5	99	6	30	73-110	
1,4-Dichlorobenzene	50.0	47.1	94	7	30	75-110	
Dichlorodifluoromethane	50.0	37.4	75	3	30	17-128	
1,1-Dichloroethane	50.0	56.2	112	6	30	79-116	
1,2-Dichloroethane	50.0	47.7	95	5	30	68-129	
1,1-Dichloroethene	50.0	53.9	108	6	30	74-135	
1,2-Dichloropropane	50.0	54.3	109	9	30	78-115	
1,3-Dichloropropane	50.0	51.1	102	3	30	74-118	
2,2-Dichloropropane	50.0	65.1	130	3	30	38-127	F
1,1-Dichloropropene	50.0	54.8	110	6	30	80-114	
Diisopropyl ether	50.0	58.5	117	6	30	73-118	
Ethylbenzene	50.0	51.0	102	6	30	75-116	
Hexachlorobutadiene	50.0	55.6	111	1	30	27-132	
2-Hexanone	100	94.4	94	0	30	47-139	
Isopropylbenzene	50.0	41.6	83	7	30	68-116	
Methylene Chloride	50.0	58.2	116	6	30	63-128	
4-Methyl-2-pentanone	100	95.8	91	3	30	56-131	
Methyl tert-butyl ether	50.0	60.9	122	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4876.D

Lab ID: 240-22543-A-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	100	103	103	5	30	75-117	
Naphthalene	50.0	52.8	106	1	30	15-158	
n-Butylbenzene	50.0	42.4	85	7	30	56-127	
n-Propylbenzene	50.0	52.5	105	4	30	64-124	
o-Xylene	50.0	45.4	91	6	30	76-116	
p-Isopropyltoluene	50.0	44.2	88	5	30	64-122	
sec-Butylbenzene	50.0	48.7	97	6	30	60-119	
Styrene	50.0	45.7	91	7	30	71-117	
tert-Butyl alcohol	1000	695	69	15	30	70-130	F
tert-Butylbenzene	50.0	53.9	108	2	30	61-119	
1,1,1,2-Tetrachloroethane	50.0	53.5	107	7	30	64-118	
1,1,2,2-Tetrachloroethane	50.0	54.0	108	1	30	63-122	
Tetrachloroethene	50.0	55.8	112	5	30	70-117	
Toluene	50.0	50.5	101	5	30	78-114	
trans-1,2-Dichloroethene	50.0	56.6	113	5	30	80-119	
trans-1,3-Dichloropropene	50.0	49.0	98	0	30	46-116	
1,2,3-Trichlorobenzene	50.0	49.8	100	5	30	45-129	
1,2,4-Trichlorobenzene	50.0	50.1	100	3	30	38-138	
1,1,1-Trichloroethane	50.0	59.3	119	7	30	68-121	
Trichloroethene	50.0	56.8	114	5	30	66-120	
Trichlorofluoromethane	50.0	38.6	77	8	30	46-157	
1,2,3-Trichloropropane	50.0	54.3	109	0	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	50.0	56.0	112	5	30	70-152	
1,2,3-Trimethylbenzene	50.0	41.3	83	6	30	70-130	
1,2,4-Trimethylbenzene	50.0	46.3	93	4	30	67-124	
Vinyl acetate	50.0	54.2	108	7	30	43-157	
Vinyl chloride	50.0	39.8	80	5	30	49-130	
Xylenes, Total	150	148	99	6	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-032613	240-22475-1	105	97	82	81
MRC-MW72B-032613	240-22475-2	110	98	96	88
MRC-MW37A-032613	240-22475-3	104	96	87	81
MRC-MW29A-032613	240-22475-4	97	91	83	78
MRC-MW-53A-032613	240-22475-6	103	96	86	81
MRC-MW-53B-032613	240-22475-7	105	100	90	82
MRC-MW-110A-032613	240-22475-8	103	96	88	80
MRC-MW-110B-032613	240-22475-9	105	98	87	81
	MB 240-80415/6	102	91	82	80
	MB 240-80568/6	97	92	86	81
	LCS 240-80415/4	98	85	94	103
	LCS 240-80568/4	98	86	93	100
	240-22543-A-1 MS	118	95	105	105
	240-22543-A-1 MSD	118	97	107	104

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: STD8260 240-76432/4 Date Analyzed: 02/26/2013 08:49

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXR3875.D Heated Purge: (Y/N) N

Calibration ID: 13870

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1935545	5.76	1538739	8.48	910410	10.72
UPPER LIMIT		3871090	6.26	3077478	8.98	1820820	11.22
LOWER LIMIT		967773	5.26	769370	7.98	455205	10.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-76432/14		1843587	5.76	1431845	8.48	895965	10.72
CCVIS 240-80415/2		1906738	5.76	1715301	8.48	1022271	10.72
CCVIS 240-80568/2		2000793	5.76	1778174	8.48	1064479	10.72

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: CCVIS 240-80415/2 Date Analyzed: 04/03/2013 12:40

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXR4822.D Heated Purge: (Y/N) N

Calibration ID: 13873

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1906738	5.76	1715301	8.48	1022271	10.72
UPPER LIMIT		3813476	6.26	3430602	8.98	2044542	11.22
LOWER LIMIT		953369	5.26	857651	7.98	511136	10.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-80415/3		2060343	5.76	1772877	8.47	907335	10.72
LCS 240-80415/4		2005590	5.76	1799658	8.48	1073362	10.72
MB 240-80415/6		1748584	5.76	1611342	8.48	865027	10.72
240-22475-4	MRC-MW29A-032613	1840416	5.76	1668115	8.47	867040	10.72
240-22475-6	MRC-MW-53A-032613	1754274	5.76	1613306	8.48	844143	10.72
240-22475-1	TB-032613	1763414	5.76	1628184	8.48	827996	10.72
240-22475-3	MRC-MW37A-032613	1700062	5.76	1560073	8.47	800734	10.72
240-22475-7	MRC-MW-53B-032613	1793893	5.76	1635232	8.48	825928	10.72
240-22475-8	MRC-MW-110A-032613	1799106	5.76	1615583	8.48	834638	10.72
240-22475-9	MRC-MW-110B-032613	1757587	5.76	1591367	8.47	817517	10.72

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: CCVIS 240-80568/2 Date Analyzed: 04/04/2013 11:32

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXR4851.D Heated Purge: (Y/N) N

Calibration ID: 13873

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2000793	5.76	1778174	8.48	1064479	10.72
UPPER LIMIT		4001586	6.26	3556348	8.98	2128958	11.22
LOWER LIMIT		1000397	5.26	889087	7.98	532240	10.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-80568/3		2047813	5.76	1769174	8.47	904149	10.72
LCS 240-80568/4		1980511	5.76	1772698	8.47	1053822	10.72
MB 240-80568/6		1763367	5.76	1609177	8.48	849823	10.72
240-22475-2	MRC-MW72B-032613	1841078	5.76	1586566	8.48	775944	10.72
240-22543-A-1 MS		1781664	5.76	1561035	8.48	791642	10.72
240-22543-A-1 MSD		1888237	5.76	1579993	8.48	768589	10.72

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: 0402001.D DFTPP Injection Date: 04/02/2013

Instrument ID: A4AG2 DFTPP Injection Time: 12:23

Analysis Batch No.: 80256

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	33.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	39.8	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	54.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	24.4	
365	Greater than 0.75% of mass 198	3.0	
441	Present, but less than mass 443	11.3	
442	40.0 - 110.0% of mass 198	81.9	
443	15.0 - 24.0% of mass 442	16.5	(20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-80256/10	0402010.D	04/02/2013	15:37
	STD8 240-80256/11	0402011.D	04/02/2013	15:59
	STD7 240-80256/12	0402012.D	04/02/2013	16:20
	STD6 240-80256/13	0402013.D	04/02/2013	16:42
	STD5 240-80256/14	0402014.D	04/02/2013	17:04
	STD4 240-80256/15	0402015.D	04/02/2013	17:25
	STD3 240-80256/16	0402016.D	04/02/2013	17:47
	STD2 240-80256/17	0402017.D	04/02/2013	18:09
	STD1 240-80256/18	0402018.D	04/02/2013	18:30
	ICV 240-80256/19	0402019.D	04/02/2013	18:52
	MB 240-79922/21-A	0402028.D	04/02/2013	22:07
	LCS 240-79922/22-A	0402029.D	04/02/2013	22:29

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 80256

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 15:37 Calibration End Date: 04/02/2013 18:30 Calibration ID: 14347

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80256/18	0402018.D
Level 2	STD2 240-80256/17	0402017.D
Level 3	STD3 240-80256/16	0402016.D
Level 4	STD4 240-80256/15	0402015.D
Level 5	STD5 240-80256/14	0402014.D
Level 6	STD6 240-80256/13	0402013.D
Level 7	STD7 240-80256/12	0402012.D
Level 8	STD8 240-80256/11	0402011.D
Level 9	STD9 240-80256/10	0402010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4626	0.5947 0.4586	0.5418 0.4905	0.5104 0.4924	0.4518	Ave		0.5004				9.7		20.0			
N-Nitrosodimethylamine	0.6313	0.4990 0.6556	0.5985 0.7034	0.5905 0.6926	0.6182	Ave		0.6236				10.0		20.0			
Pyridine	1.1465	1.0018 1.1644	1.1053 1.2576	1.1543 1.2317	1.1242	Ave		1.1482				6.8		20.0			
Benzaldehyde	0.9722	+++++ 0.9750	0.9910 1.0327	0.9986 0.9821	0.9975	Ave		0.9861			0.0100	2.7		20.0			
Phenol	1.4822	1.4876 1.5181	1.5297 1.6234	1.4911 1.5742	1.5147	Ave		1.5276			0.8000	3.2		20.0			
Aniline	1.9109	1.8808 1.9330	1.9101 2.0658	1.9156 2.0213	1.9062	Ave		1.9430				3.3		20.0			
Bis(2-chloroethyl)ether	1.2043	1.2155 1.2283	1.2180 1.3036	1.2254 1.2422	1.2263	Ave		1.2329			0.7000	2.5		20.0			
2-Chlorophenol	1.2321	1.1390 1.2499	1.2188 1.3507	1.2090 1.3177	1.2499	Ave		1.2459			0.8000	5.2		20.0			
1,3-Dichlorobenzene	1.3162	1.3059 1.3417	1.3655 1.4444	1.3436 1.4021	1.3328	Ave		1.3565				3.4		20.0			
1,4-Dichlorobenzene	1.3208	1.3775 1.3502	1.3771 1.4508	1.3656 1.4261	1.3560	Ave		1.3780				3.0		20.0			
Benzyl alcohol	0.7892	0.7191 0.8193	0.7447 0.8808	0.8073 0.8399	0.8005	Ave		0.8001				6.4		20.0			
1,2-Dichlorobenzene	1.2832	1.2935 1.2775	1.3126 1.3845	1.3293 1.3475	1.2793	Ave		1.3134				2.9		20.0			
2-Methylphenol	1.1241	1.0812 1.1532	1.1252 1.2421	1.1212 1.1898	1.1584	Ave		1.1494			0.7000	4.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-80256/19 Calibration Date: 04/02/2013 18:52

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0402019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4791		9.58	10.0	-4.2	30.0
N-Nitrosodimethylamine	Ave	0.6236	0.6482		10.4	10.0	3.9	30.0
Pyridine	Ave	1.148	1.229		10.7	10.0	7.1	30.0
Benzaldehyde	Ave	0.9861	1.013	0.0100	20.6	20.0	2.8	30.0
Phenol	Ave	1.528	1.615	0.8000	10.6	10.0	5.7	30.0
Aniline	Ave	1.943	2.017		10.4	10.0	3.8	30.0
Bis(2-chloroethyl)ether	Ave	1.233	1.265	0.7000	10.3	10.0	2.6	30.0
2-Chlorophenol	Ave	1.246	1.317	0.8000	10.6	10.0	5.7	30.0
1,3-Dichlorobenzene	Ave	1.357	1.411		10.4	10.0	4.0	30.0
1,4-Dichlorobenzene	Ave	1.378	1.456		10.6	10.0	5.7	30.0
Benzyl alcohol	Ave	0.8001	0.8654		10.8	10.0	8.2	30.0
1,2-Dichlorobenzene	Ave	1.313	1.369		10.4	10.0	4.2	30.0
2-Methylphenol	Ave	1.149	1.246	0.7000	10.8	10.0	8.4	30.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.279		7.42	7.20	3.0	30.0
Indene	Ave	2.172	2.288		21.1	20.0	5.4	30.0
3 & 4 Methylphenol	Ave	1.201	1.280		10.7	10.0	6.6	30.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.9049	0.5000	10.7	10.0	7.2	30.0
Acetophenone	Ave	1.689	1.774	0.0100	10.5	10.0	5.0	30.0
Hexachloroethane	Ave	0.5369	0.5770	0.3000	10.7	10.0	7.5	30.0
Nitrobenzene	Ave	0.3193	0.3415	0.2000	10.7	10.0	7.0	30.0
Isophorone	Ave	0.5793	0.6528	0.4000	11.3	10.0	12.7	30.0
2-Nitrophenol	Ave	0.1527	0.1711	0.1000	11.2	10.0	12.1	30.0
2,4-Dimethylphenol	Ave	0.3096	0.3211	0.2000	10.4	10.0	3.7	30.0
Benzoic acid	Qua		0.1825		23.4	20.0	16.8	30.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3832	0.3000	10.3	10.0	3.1	30.0
2,4-Dichlorophenol	Ave	0.2434	0.2633	0.2000	10.8	10.0	8.2	30.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2842		10.5	10.0	5.0	30.0
Naphthalene	Ave	0.9352	0.9825	0.7000	10.5	10.0	5.0	30.0
4-Chloroaniline	Ave	0.3945	0.4147	0.0100	10.5	10.0	5.1	30.0
Hexachlorobutadiene	Ave	0.1430	0.1490	0.0100	10.4	10.0	4.2	30.0
Caprolactam	Ave	0.0866	0.0988	0.0100	22.8	20.0	14.2	30.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2931	0.2000	11.1	10.0	11.0	30.0
2-Methylnaphthalene	Ave	0.6265	0.6516	0.4000	10.4	10.0	4.0	30.0
1-Methylnaphthalene	Ave	0.5852	0.6108		10.4	10.0	4.4	30.0
Hexachlorocyclopentadiene	Linl		0.2716	0.0500	10.1	10.0	0.6	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4812	0.0100	10.5	10.0	5.4	30.0
2,4,6-Trichlorophenol	Ave	0.2852	0.3273	0.2000	11.5	10.0	14.8	30.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3440	0.2000	11.3	10.0	12.5	30.0
1,1'-Biphenyl	Ave	1.319	1.403	0.0100	10.6	10.0	6.3	30.0
2-Chloronaphthalene	Ave	0.9699	1.026	0.8000	10.6	10.0	5.7	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: 0403001.D DFTPP Injection Date: 04/03/2013

Instrument ID: A4AG2 DFTPP Injection Time: 10:16

Analysis Batch No.: 80345

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	35.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.9	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	55.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.3	
365	Greater than 0.75% of mass 198	2.7	
441	Present, but less than mass 443	10.5	
442	40.0 - 110.0% of mass 198	72.7	
443	15.0 - 24.0% of mass 442	14.4	(19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-80345/2	0403002.D	04/03/2013	10:38
MRC-MW-53A-032613	240-22475-6	0403013.D	04/03/2013	14:36
MRC-MW-53B-032613	240-22475-7	0403014.D	04/03/2013	14:58
MRC-MW-110A-032613	240-22475-8	0403015.D	04/03/2013	15:20
MRC-MW-110B-032613	240-22475-9	0403016.D	04/03/2013	15:41

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: STD6 240-80345/2 Calibration Date: 04/03/2013 10:38

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0403002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4673		9.34	10.0	-6.6	20.0
N-Nitrosodimethylamine	Ave	0.6236	0.6431		10.3	10.0	3.1	20.0
Pyridine	Ave	1.148	1.174		10.2	10.0	2.3	20.0
Benzaldehyde	Ave	0.9861	0.9906	0.0100	20.1	20.0	0.5	20.0
Phenol	Ave	1.528	1.540	0.8000	10.1	10.0	0.8	20.0
Aniline	Ave	1.943	1.924		9.90	10.0	-1.0	20.0
Bis(2-chloroethyl)ether	Ave	1.233	1.227	0.7000	9.95	10.0	-0.5	20.0
2-Chlorophenol	Ave	1.246	1.265	0.8000	10.2	10.0	1.6	20.0
1,3-Dichlorobenzene	Ave	1.357	1.328		9.79	10.0	-2.1	20.0
1,4-Dichlorobenzene	Ave	1.378	1.360		9.87	10.0	-1.3	20.0
Benzyl alcohol	Ave	0.8001	0.8339		10.4	10.0	4.2	20.0
1,2-Dichlorobenzene	Ave	1.313	1.296		9.87	10.0	-1.3	20.0
2-Methylphenol	Ave	1.149	1.156	0.7000	10.1	10.0	0.6	20.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.250		10.1	10.0	0.7	20.0
Indene	Ave	2.172	2.176		20.0	20.0	0.2	20.0
3 & 4 Methylphenol	Ave	1.201	1.200		9.99	10.0	-0.1	20.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.8682	0.5000	10.3	10.0	2.8	20.0
Acetophenone	Ave	1.689	1.689	0.0100	10.0	10.0	-0.0	20.0
Hexachloroethane	Ave	0.5369	0.5408	0.3000	10.1	10.0	0.7	20.0
Nitrobenzene	Ave	0.3193	0.3149	0.2000	9.86	10.0	-1.4	20.0
Isophorone	Ave	0.5793	0.5910	0.4000	10.2	10.0	2.0	20.0
2-Nitrophenol	Ave	0.1527	0.1618	0.1000	10.6	10.0	6.0	20.0
2,4-Dimethylphenol	Ave	0.3096	0.3050	0.2000	9.85	10.0	-1.5	20.0
Benzoic acid	Qua		0.1603		21.3	20.0	6.5	20.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3708	0.3000	9.97	10.0	-0.3	20.0
2,4-Dichlorophenol	Ave	0.2434	0.2460	0.2000	10.1	10.0	1.1	20.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2648		9.78	10.0	-2.2	20.0
Naphthalene	Ave	0.9352	0.9203	0.7000	9.84	10.0	-1.6	20.0
4-Chloroaniline	Ave	0.3945	0.3899	0.0100	9.88	10.0	-1.2	20.0
Hexachlorobutadiene	Ave	0.1430	0.1394	0.0100	9.75	10.0	-2.5	20.0
Caprolactam	Ave	0.0866	0.0912	0.0100	21.1	20.0	5.3	20.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2633	0.2000	9.98	10.0	-0.2	20.0
2-Methylnaphthalene	Ave	0.6265	0.6065	0.4000	9.68	10.0	-3.2	20.0
1-Methylnaphthalene	Ave	0.5852	0.5744		9.82	10.0	-1.8	20.0
Hexachlorocyclopentadiene	Lin1		0.2664	0.0500	9.87	10.0	-1.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4330	0.0100	9.48	10.0	-5.2	20.0
2,4,6-Trichlorophenol	Ave	0.2852	0.2908	0.2000	10.2	10.0	2.0	20.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3026	0.2000	9.90	10.0	-1.0	20.0
1,1'-Biphenyl	Ave	1.319	1.255	0.0100	9.51	10.0	-4.9	20.0
2-Chloronaphthalene	Ave	0.9699	0.9302	0.8000	9.59	10.0	-4.1	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab File ID: 0402028.D Lab Sample ID: MB 240-79922/21-A

Matrix: Water Date Extracted: 03/29/2013 10:47

Instrument ID: A4AG2 Date Analyzed: 04/02/2013 22:07

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-79922/22-A	0402029.D	04/02/2013 22:29
MRC-MW-53A-032613	240-22475-6	0403013.D	04/03/2013 14:36
MRC-MW-53B-032613	240-22475-7	0403014.D	04/03/2013 14:58
MRC-MW-110A-032613	240-22475-8	0403015.D	04/03/2013 15:20
MRC-MW-110B-032613	240-22475-9	0403016.D	04/03/2013 15:41

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79922/21-A

Matrix: Water | Lab File ID: 0402028.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 03/29/2013 10:47

Sample wt/vol: 1000(mL) | Date Analyzed: 04/02/2013 22:07

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80256 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		20-110
367-12-4	2-Fluorophenol (Surr)	69		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	68		21-110
4165-62-2	Phenol-d5 (Surr)	70		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0402029.D

Lab ID: LCS 240-79922/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	15.3	77	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW-53A-032613	240-22475-6	56	61	58	55	77	55
MRC-MW-53B-032613	240-22475-7	70	71	71	64	78	61
MRC-MW-110A-032613	240-22475-8	68	70	68	62	74	57
MRC-MW-110B-032613	240-22475-9	64	65	64	59	72	55
	MB 240-79922/21-A	69	70	68	64	65	58
	LCS 240-79922/22-A	82	84	82	74	87	68

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: STD6 240-80256/13 Date Analyzed: 04/02/2013 16:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0402013.D Heated Purge: (Y/N) N

Calibration ID: 14347

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		275675	5.95	1051353	7.07	595336	8.56
UPPER LIMIT		551350	6.45	2102706	7.57	1190672	9.06
LOWER LIMIT		137838	5.45	525677	6.57	297668	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80256/19		282466	5.95	1110982	7.07	634290	8.56
MB 240-79922/21-A		240526	5.95	937386	7.07	533599	8.56
LCS 240-79922/22-A		202071	5.95	778153	7.07	453030	8.56
STD6 240-80345/2 CCVIS		253188	5.95	1004251	7.06	586426	8.56

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: STD6 240-80256/13 Date Analyzed: 04/02/2013 16:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0402013.D Heated Purge: (Y/N) N

Calibration ID: 14347

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1027373	9.83	1071893	12.40	891992	14.50
UPPER LIMIT		2054746	10.33	2143786	12.90	1783984	15.00
LOWER LIMIT		513687	9.33	535947	11.90	445996	14.00
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80256/19		1062456	9.83	1134298	12.40	957021	14.50
MB 240-79922/21-A		921497	9.83	928175	12.40	720222	14.50
LCS 240-79922/22-A		768770	9.83	810193	12.40	641348	14.50
STD6 240-80345/2 CCVIS		985241	9.82	1044465	12.39	891475	14.48

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: STD6 240-80345/2 Date Analyzed: 04/03/2013 10:38

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0403002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		253188	5.95	1004251	7.06	586426	8.56
UPPER LIMIT		506376	6.45	2008502	7.56	1172852	9.06
LOWER LIMIT		126594	5.45	502126	6.56	293213	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22475-6	MRC-MW-53A-032613	234772	5.95	931593	7.06	543289	8.55
240-22475-7	MRC-MW-53B-032613	242422	5.95	940362	7.06	557867	8.55
240-22475-8	MRC-MW-110A-032613	249252	5.95	974963	7.06	579877	8.56
240-22475-9	MRC-MW-110B-032613	254378	5.95	1009162	7.06	586467	8.55

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: STD6 240-80345/2 Date Analyzed: 04/03/2013 10:38

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0403002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		985241	9.82	1044465	12.39	891475	14.48
UPPER LIMIT		1970482	10.32	2088930	12.89	1782950	14.98
LOWER LIMIT		492621	9.32	522233	11.89	445738	13.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22475-6	MRC-MW-53A-032613	941884	9.82	983259	12.39	779815	14.48
240-22475-7	MRC-MW-53B-032613	935823	9.82	971264	12.39	751017	14.48
240-22475-8	MRC-MW-110A-032613	972176	9.82	1029001	12.39	796344	14.48
240-22475-9	MRC-MW-110B-032613	1014320	9.82	1046038	12.39	804230	14.48

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Ave	38438 11934310	123659 81376315	406582 36666789	1209668 159521463	3969261	0.251 116	0.965 772	3.86 347	11.6 1543	38.6
Ethene	Ave	42640 18928943	178527 128474180	602389 57345534	1803144 247666290	6346457	0.440 203	1.69 1355	6.78 610	20.3 2710	67.8
Acetylene	Ave	10063 5189958	41670 40355973	142717 16648752	430060 77009812	1642953	0.408 188	1.57 1254	6.27 564	18.8 2508	62.7
Ethane	Ave	47848 22508675	203442 153167226	696560 68933291	2103657 300072325	7472670	0.472 218	1.81 1452	7.26 653	21.8 2903	72.6
Propene	Ave	52126 27266136	224438 185584124	758081 82393900	2265818 357727706	9132788	0.660 305	2.54 2030	10.2 914	30.5 4060	102
Propane	Ave	63821 34014805	279391 231733482	964752 104277738	2915538 454872922	11246033	0.691 319	2.66 2127	10.6 957	31.9 4253	106
Propane, 2-methyl	Ave	76200 45765053	333875 311308529	1215789 140338679	3674766 613077945	15084964	0.911 420	3.50 2802	14.0 1261	42.0 5604	140
1,1,1-Trifluoroethane	Ave	2054100 367330855	8954283	36585949 500284541	121933404	249161727	65.8 9114	253	1013 12152	3038	6076

Curve Type Legend:
Ave = Average

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909		0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392		1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489		1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655		1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512		3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705		3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319		5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657			2.572 - 2.772	2.699

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Sample No.: CCVRT 240-79766/3 Date Analyzed: 03/28/2013 13:06

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0032803.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.71		
UPPER LIMIT				2.76		
LOWER LIMIT				2.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-79766/3		03/28/2013 13:06	Z0032803.D	2.71		
LCS 240-79766/4		03/28/2013 13:18	Z0032804.D	2.70		
MB 240-79766/5		03/28/2013 13:30	Z0032805.D	2.70		
240-22475-2	MRC-MW72B-032613	03/28/2013 14:56	Z0032812.D	2.70		
240-22475-3	MRC-MW37A-032613	03/28/2013 15:08	Z0032813.D	2.70		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVRT 240-79766/3 Calibration Date: 03/28/2013 13:06

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0032803.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	104986		108	116	-6.6	30.0
Ethene	Ave	94091	97247		210	203	3.4	30.0
Acetylene	Ave	27012	33890		236	188	25.5	30.0
Ethane	Ave	102982	102315		216	218	-0.6	30.0
Propene	Ave	85073	87348		313	305	2.7	30.0
Propane	Ave	101861	99568		312	319	-2.3	30.0
Propane, 2-methyl	Ave	100175	97534		409	420	-2.6	30.0
1,1,1-Trifluoroethane	Ave	37902	41590		2670	2440	9.7	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVRT 240-79766/3 Calibration Date: 03/28/2013 13:06

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0032803.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: MB 240-79766/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0032805.D Lab File ID:(2)

Date Analyzed:(1) 03/28/2013 13:30 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-79766/4	03/28/2013 13:18	
MRC-MW72B-032613	240-22475-2	03/28/2013 14:56	
MRC-MW37A-032613	240-22475-3	03/28/2013 15:08	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79766/5

Matrix: Water | Lab File ID: Z0032805.D

Analysis Method: RSK-175 | Date Collected:

Sample wt/vol: 17(mL) | Date Analyzed: 03/28/2013 13:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79766 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.159	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	111		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032804.D

Lab ID: LCS 240-79766/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	224	110	64-130	
Ethane	218	233	107	77-127	
Methane	116	112	97	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW72B-032613	240-22475-2	101
MRC-MW37A-032613	240-22475-3	100
	MB 240-79766/5	111
	LCS 240-79766/4	110

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

6850

Perchlorate by LC/MS or LC/MS/MS

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2013-04-02 12:49		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.67	0.70	0.10	-0.03	Pass	53210	0	Pass
302.00	302.00	0.10	0.00	Pass	0.67	0.70	0.10	-0.03	Pass	170236	0	Pass
601.99	601.98	0.10	0.01	Pass	0.65	0.70	0.10	-0.05	Pass	997155	0	Pass
1033.96	1033.99	0.10	-0.03	Pass	0.65	0.70	0.10	-0.05	Pass	661791	0	Pass
1333.95	1333.97	0.10	-0.02	Pass	0.66	0.70	0.10	-0.04	Pass	944543	0	Pass
1633.93	1633.95	0.10	-0.02	Pass	0.64	0.70	0.10	-0.06	Pass	595664	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.02	112.99	0.10	0.03	Pass	0.68	0.70	0.10	-0.02	Pass	272909	0	Pass
302.01	302.00	0.10	0.01	Pass	0.67	0.70	0.10	-0.03	Pass	195660	0	Pass
602.00	601.98	0.10	0.02	Pass	0.67	0.70	0.10	-0.03	Pass	513759	0	Pass
1034.02	1033.99	0.10	0.03	Pass	0.66	0.70	0.10	-0.04	Pass	303988	0	Pass
1334.01	1333.97	0.10	0.04	Pass	0.66	0.70	0.10	-0.04	Pass	750619	0	Pass
1633.97	1633.95	0.10	0.02	Pass	0.63	0.70	0.10	-0.07	Pass	591879	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.30	-0.01	Pass	1.17	1.20	0.60	-0.03	Pass	65997	0	Pass
301.88	302.00	0.30	-0.12	Pass	1.34	1.20	0.60	0.14	Pass	280216	0	Pass
601.89	601.98	0.30	-0.09	Pass	1.35	1.20	0.60	0.15	Pass	1580414	0	Pass
1033.91	1033.99	0.30	-0.08	Pass	1.28	1.20	0.60	0.08	Pass	1327805	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.27	1.20	0.60	0.07	Pass	2573837	0	Pass
1633.88	1633.95	0.30	-0.07	Pass	1.21	1.20	0.60	0.01	Pass	2450434	0	Pass

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.19	1.20	0.60	-0.01	Pass	358538	0	Pass
302.01	302.00	0.30	0.01	Pass	1.24	1.20	0.60	0.04	Pass	286426	0	Pass
601.97	601.98	0.30	-0.01	Pass	1.23	1.20	0.60	0.03	Pass	825842	0	Pass
1033.98	1033.99	0.30	-0.01	Pass	1.23	1.20	0.60	0.03	Pass	619539	0	Pass
1333.97	1333.97	0.30	0.00	Pass	1.23	1.20	0.60	0.03	Pass	1448989	0	Pass
1633.98	1633.95	0.30	0.03	Pass	1.22	1.20	0.60	0.02	Pass	1236455	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.96	112.99	0.50	-0.03	Pass	2.49	2.50	1.25	-0.01	Pass	73215	0	Pass
301.85	302.00	0.50	-0.15	Pass	2.68	2.50	1.25	0.18	Pass	345825	0	Pass
601.85	601.98	0.50	-0.13	Pass	2.75	2.50	1.25	0.25	Pass	1811568	0	Pass
1033.87	1033.99	0.50	-0.12	Pass	2.63	2.50	1.25	0.13	Pass	1906517	0	Pass
1333.87	1333.97	0.50	-0.10	Pass	2.61	2.50	1.25	0.11	Pass	3881199	0	Pass
1633.89	1633.95	0.50	-0.06	Pass	2.51	2.50	1.25	0.01	Pass	4087221	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.90	112.99	0.50	-0.09	Pass	2.60	2.50	1.25	0.10	Pass	420522	0	Pass
301.94	302.00	0.50	-0.06	Pass	2.58	2.50	1.25	0.08	Pass	402501	0	Pass
601.93	601.98	0.50	-0.05	Pass	2.57	2.50	1.25	0.07	Pass	1352701	0	Pass
1034.01	1033.99	0.50	0.02	Pass	2.45	2.50	1.25	-0.05	Pass	1267148	0	Pass
1333.96	1333.97	0.50	-0.01	Pass	2.49	2.50	1.25	-0.01	Pass	3035977	0	Pass
1634.04	1633.95	0.50	0.09	Pass	2.45	2.50	1.25	-0.05	Pass	2960512	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Instrument ID: A5 Start Date: 04/02/2013 15:41

Analysis Batch Number: 13496 End Date: 04/03/2013 13:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/02/2013 15:41	1		Anion HR 4.6(mm)
ICB 320-13496/2		04/02/2013 15:58	1	02APR13-perc-004.d	Anion HR 4.6(mm)
STD01 320-13496/3 IC	CAL	04/02/2013 16:14	1	02APR13-perc-005.d	Anion HR 4.6(mm)
STD02 320-13496/4 IC		04/02/2013 16:31	1	02APR13-perc-006.d	Anion HR 4.6(mm)
STD03 320-13496/5 IC		04/02/2013 16:47	1	02APR13-perc-007.d	Anion HR 4.6(mm)
STD04 320-13496/6 ICISAV		04/02/2013 17:04	1	02APR13-perc-008.d	Anion HR 4.6(mm)
STD05 320-13496/7 IC		04/02/2013 17:20	1	02APR13-perc-009.d	Anion HR 4.6(mm)
STD06 320-13496/8 IC		04/02/2013 17:37	1	02APR13-perc-010.d	Anion HR 4.6(mm)
STD07 320-13496/9 IC		04/02/2013 17:53	1	02APR13-perc-011.d	Anion HR 4.6(mm)
STD08 320-13496/10 IC		04/02/2013 18:10	1	02APR13-perc-012.d	Anion HR 4.6(mm)
CCB 320-13496/11		04/02/2013 18:26	1	02APR13-perc-013.d	Anion HR 4.6(mm)
ICV 320-13496/12		04/02/2013 18:43	1	02APR13-perc-014.d	Anion HR 4.6(mm)
CCB 320-13496/62		04/03/2013 08:28	1	02APR13-perc-064.d	Anion HR 4.6(mm)
CCVL 320-13496/63		04/03/2013 08:45	1	02APR13-perc-065.d	Anion HR 4.6(mm)
MB 320-13458/1-A		04/03/2013 09:01	1	02APR13-perc-066.d	Anion HR 4.6(mm)
LCS 320-13458/2-A		04/03/2013 09:18	1	02APR13-perc-067.d	Anion HR 4.6(mm)
INF 320-13458/3-A		04/03/2013 09:34	1	02APR13-perc-068.d	Anion HR 4.6(mm)
ZZZZZ		04/03/2013 09:51	1		Anion HR 4.6(mm)
240-22303-D-4-B MS		04/03/2013 10:07	1	02APR13-perc-070.d	Anion HR 4.6(mm)
240-22303-D-4-C MSD		04/03/2013 10:24	1	02APR13-perc-071.d	Anion HR 4.6(mm)
ZZZZZ		04/03/2013 10:40	1		Anion HR 4.6(mm)
240-22475-6	MRC-MW-53A-032613	04/03/2013 10:57	1	02APR13-perc-073.d	Anion HR 4.6(mm)
240-22475-7	MRC-MW-53B-032613	04/03/2013 11:13	1	02APR13-perc-074.d	Anion HR 4.6(mm)
240-22475-8	MRC-MW-110A-032613	04/03/2013 11:30	1	02APR13-perc-075.d	Anion HR 4.6(mm)
240-22475-9	MRC-MW-110B-032613	04/03/2013 11:46	1	02APR13-perc-076.d	Anion HR 4.6(mm)
ZZZZZ		04/03/2013 12:03	1		Anion HR 4.6(mm)
ZZZZZ		04/03/2013 12:19	1		Anion HR 4.6(mm)
CCVL 320-13496/77		04/03/2013 12:36	1	02APR13-perc-079.d	Anion HR 4.6(mm)
CCV 320-13496/78		04/03/2013 12:52	1	02APR13-perc-080.d	Anion HR 4.6(mm)
CCB 320-13496/79		04/03/2013 13:09	1	02APR13-perc-081.d	Anion HR 4.6(mm)

6850

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.8443 0.7603	0.8106 0.8079	0.7242 0.8387	0.7636	0.7815	Ave		0.7914				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	2273493 67422374	4374681 132085000	6549574 261992582	13545542	27801799	0.150 5.00	0.300 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICV 320-13496/12 Calibration Date: 04/02/2013 18:43

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.8179		5.17	5.00	3.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVL 320-13496/63 Calibration Date: 04/03/2013 08:45

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-065.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7859		0.496	0.500	-0.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVL 320-13496/77 Calibration Date: 04/03/2013 12:36

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-079.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7690		0.486	0.500	-2.8	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCV 320-13496/78 Calibration Date: 04/03/2013 12:52

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-080.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7780		4.92	5.00	-1.7	15.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-13496/2

Matrix: Water Lab File ID: 02APR13-perc-004.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/02/2013 15:58

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/11

Matrix: Water Lab File ID: 02APR13-perc-013.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/02/2013 18:26

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/62

Matrix: Water Lab File ID: 02APR13-perc-064.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/03/2013 08:28

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/79

Matrix: Water Lab File ID: 02APR13-perc-081.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/03/2013 13:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Lab File ID: 02APR13-perc-066.d Lab Sample ID: MB 320-13458/1-A

Matrix: Water Date Extracted: 04/02/2013 09:49

Instrument ID: A5 Date Analyzed: 04/03/2013 09:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-13458/2-A	02APR13-perc-067.d	04/03/2013 09:18
	240-22303-D-4-B MS	02APR13-perc-070.d	04/03/2013 10:07
	240-22303-D-4-C MSD	02APR13-perc-071.d	04/03/2013 10:24
MRC-MW-53A-032613	240-22475-6	02APR13-perc-073.d	04/03/2013 10:57
MRC-MW-53B-032613	240-22475-7	02APR13-perc-074.d	04/03/2013 11:13
MRC-MW-110A-032613	240-22475-8	02APR13-perc-075.d	04/03/2013 11:30
MRC-MW-110B-032613	240-22475-9	02APR13-perc-076.d	04/03/2013 11:46

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-13458/1-A

Matrix: Water Lab File ID: 02APR13-perc-066.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 09:01

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-067.d

Lab ID: LCS 320-13458/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	5.08	102	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-070.d

Lab ID: 240-22303-D-4-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.50 U	4.74	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-071.d

Lab ID: 240-22303-D-4-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	4.80	96	1	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-068.d

Lab ID: INF 320-13458/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.82	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/02/2013 18:10

Calibration ID: 2501

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		174201778	9.98				
UPPER LIMIT		261302667	10.98				
LOWER LIMIT		87100889	8.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-13496/11		183986481	9.98				
ICV 320-13496/12		178010087	9.98				
CCB 320-13496/62		171394587	9.98				
CCVL 320-13496/63		179384534	10.00				
MB 320-13458/1-A		178957593	9.98				
LCS 320-13458/2-A		157475265	9.98				
INF 320-13458/3-A		160252234	9.91				
240-22303-D-4-B MS		165720309	9.91				
240-22303-D-4-C MSD		184204219	9.93				
240-22475-6	MRC-MW-53A-032613	181673318	9.94				
240-22475-7	MRC-MW-53B-032613	159519735	9.96				
240-22475-8	MRC-MW-110A-032613	169330143	9.98				
240-22475-9	MRC-MW-110B-032613	167441850	9.98				
CCVL 320-13496/77		177450415	10.00				
CCV 320-13496/78		178027486	10.00				
CCB 320-13496/79		175726361	10.00				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW72B-032613	240-22475-2
MRC-MW37A-032613	240-22475-3

Comments:

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22475-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW37A-032613	240-22475-3
MRC-MW29A-032613	240-22475-4
MRC-MW26A-032613	240-22475-5
MRC-MW-53A-032613	240-22475-6
MRC-MW-53B-032613	240-22475-7
MRC-MW-110A-032613	240-22475-8
MRC-MW-110B-032613	240-22475-9

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 08:41 End Date: 04/05/2013 12:07

| Lab Sample Id | D/F | Type | Time | Analytes | | |

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-96433/7 04/05/2013 08:57				CCV 440-96433/12 04/05/2013 10:33				CCV 440-96433/24 04/05/2013 11:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.9		25.0	91	51.1		50.0	102	52.4		50.0	105
Arsenic	23.7		25.0	95	49.0		50.0	98	49.8		50.0	100
Barium	23.7		25.0	95	50.5		50.0	101	50.7		50.0	101
Cadmium	23.7		25.0	95	48.9		50.0	98	49.8		50.0	100
Chromium	24.3		25.0	97	51.6		50.0	103	51.0		50.0	102
Cobalt	24.4		25.0	97	50.9		50.0	102	49.6		50.0	99
Copper	22.5		25.0	90	47.4		50.0	95	46.2		50.0	92
Lead	23.3		25.0	93	52.4		50.0	105	52.6		50.0	105
Molybdenum	22.9		25.0	91	45.9		50.0	92	46.9		50.0	94
Nickel	22.7		25.0	91	47.4		50.0	95	46.2		50.0	92
Selenium	24.3		25.0	97	49.6		50.0	99	50.4		50.0	101
Silver	23.0		25.0	92	49.3		50.0	99	50.9		50.0	102
Thallium	22.5		25.0	90	53.1		50.0	106	53.6		50.0	107
Vanadium	24.5		25.0	98	51.3		50.0	103	51.0		50.0	102
Zinc	22.5		25.0	90	50.6		50.0	101	51.2		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	CCV 440-96433/37 04/05/2013 11:40				CCV 440-96433/46 04/05/2013 12:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.0		50.0	104	51.7		50.0	103				
Arsenic	49.4		50.0	99	49.5		50.0	99				
Barium	50.7		50.0	101	50.3		50.0	101				
Cadmium	49.3		50.0	99	49.1		50.0	98				
Chromium	51.3		50.0	103	50.7		50.0	101				
Cobalt	50.4		50.0	101	49.7		50.0	99				
Copper	46.6		50.0	93	46.5		50.0	93				
Lead	52.6		50.0	105	52.6		50.0	105				
Molybdenum	46.5		50.0	93	45.8		50.0	92				
Nickel	47.0		50.0	94	46.5		50.0	93				
Selenium	50.5		50.0	101	50.9		50.0	102				
Silver	50.5		50.0	101	50.2		50.0	100				
Thallium	53.1		50.0	106	53.5		50.0	107				
Vanadium	51.4		50.0	103	51.3		50.0	103				
Zinc	50.7		50.0	101	51.1		50.0	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96433/8 04/05/2013 09:05		CCB 440-96433/13 04/05/2013 10:36		CCB 440-96433/26 04/05/2013 11:11		CCB 440-96433/39 04/05/2013 11:46	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.229	J	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.245	J	1.0	U	1.0	U
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96231/1-A

Instrument Code: ICPMS4 Batch No.: 96433

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	1.00	J		6020
7440-62-2	Vanadium	20	U		6020

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-96231/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	79.5		99	80	120		6020
Arsenic	80.0	76.3		95	80	120		6020
Cadmium	80.0	76.6		96	80	120		6020
Barium	80.0	76.8		96	80	120		6020
Chromium	80.0	77.8		97	80	120		6020
Copper	80.0	71.5		89	80	120		6020
Nickel	80.0	71.4		89	80	120		6020
Lead	80.0	80.2		100	80	120		6020
Selenium	80.0	79.3		99	80	120		6020
Cobalt	80.0	76.4		95	80	120		6020
Silver	80.0	81.1		101	80	120		6020
Thallium	80.0	80.3		100	80	120		6020
Zinc	80.0	75.1		94	80	120		6020
Molybdenum	80.0	71.1		89	80	120		6020
Vanadium	80.0	75.4		94	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96433/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.925	J	93	50-150
Arsenic	1.00	1.04		104	50-150
Cadmium	0.500	0.504	J	101	50-150
Barium	1.00	1.01		101	50-150
Chromium	1.00	0.962	J	96	50-150
Copper	1.00	0.889	J	89	50-150
Nickel	1.00	0.765	J	77	50-150
Lead	1.00	0.963	J	96	50-150
Selenium	1.00	0.877	J	88	50-150
Cobalt	0.500	0.459	J	92	50-150
Silver	1.00	0.855	J	86	50-150
Thallium	1.00	0.910	J	91	50-150
Zinc	5.00	5.02	J	100	50-150
Molybdenum	1.00	0.944	J	94	50-150
Vanadium	2.00	1.91	J	96	50-150

Lab Sample ID: CRI 440-96433/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.93	J	96	50-150
Arsenic	2.00	1.95		97	50-150
Cadmium	1.00	1.02		102	50-150
Barium	2.00	2.07		104	50-150
Chromium	2.00	2.00		100	50-150
Copper	2.00	1.80	J	90	50-150
Nickel	2.00	1.82	J	91	50-150
Lead	2.00	1.97		99	50-150
Selenium	2.00	1.88	J	94	50-150
Cobalt	1.00	0.982	J	98	50-150
Silver	2.00	1.92		96	50-150
Thallium	2.00	1.88		94	50-150
Zinc	10.0	10.5	J	105	50-150
Molybdenum	2.00	1.95	J	98	50-150
Vanadium	4.00	3.90		98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-J-2-B MS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	80.9		2.0	U	80.0	101	75-125		6020
Arsenic	75.9		5.0	U	80.0	95	75-125		6020
Beryllium	90.6		11		80.0	100	75-125		6020
Cadmium	75.9		0.39	J	80.0	94	75-125		6020
Barium	239		160		80.0	105	75-125		6020
Chromium	75.5		2.0	U	80.0	94	75-125		6020
Copper	106		30		80.0	95	75-125		6020
Nickel	216		150		80.0	88	75-125		6020
Lead	76.1		0.26	J	80.0	95	75-125		6020
Selenium	76.0		0.79	J	80.0	94	75-125		6020
Cobalt	184		110		80.0	90	75-125		6020
Silver	78.5		0.32	J	80.0	98	75-125		6020
Thallium	77.0		0.36	J	80.0	96	75-125		6020
Zinc	387		310		80.0	100	75-125		6020
Molybdenum	72.3		0.72	J	80.0	90	75-125		6020
Vanadium	76.6		0.83	J	80.0	95	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-J-2-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.9		80.0	100	75-125	1	20		6020
Arsenic	76.5		80.0	96	75-125	1	20		6020
Beryllium	91.5		80.0	101	75-125	1	20		6020
Cadmium	74.7		80.0	93	75-125	2	20		6020
Barium	238		80.0	104	75-125	1	20		6020
Chromium	75.6		80.0	95	75-125	0	20		6020
Copper	107		80.0	97	75-125	1	20		6020
Nickel	217		80.0	89	75-125	1	20		6020
Lead	77.0		80.0	96	75-125	1	20		6020
Selenium	77.6		80.0	96	75-125	2	20		6020
Cobalt	188		80.0	95	75-125	2	20		6020
Silver	78.3		80.0	97	75-125	0	20		6020
Thallium	77.8		80.0	97	75-125	1	20		6020
Zinc	384		80.0	96	75-125	1	20		6020
Molybdenum	72.1		80.0	89	75-125	0	20		6020
Vanadium	77.8		80.0	96	75-125	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 440-42596-K-1-B SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22475-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	12		12.9	J	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	25		25.7		0.79		6020
Chromium	1.1	J	10	U	NC		6020
Copper	2.6		10	U	NC		6020
Nickel	2.0	U	10	U	NC		6020
Lead	0.25	J	5.0	U	NC		6020
Selenium	3.7	J	3.26	J	NC		6020
Cobalt	1.0	U	5.0	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	7.0	J	100	U	NC		6020
Molybdenum	40		40.3	J	1.6		6020
Vanadium	18	J	16.3	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICSA 440-96433/14 Instrument ID: ICPMS4

Lab File ID: 041ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.273**	
Arsenic		**0.144**	
Barium		**0.224**	
Cadmium		**0.0840**	
Chromium		**1.42**	
Cobalt		**0.0510**	
Copper		**0.572**	
Lead		**0.106**	
Molybdenum	**2000**	**2134**	**107**
Nickel		**0.564**	
Selenium		**-0.120**	
Silver		**0.0600**	
Thallium		**-0.0030**	
Vanadium		**0.0720**	
Zinc		**14.7**	
Aluminum	*100000*	*96858*	*97*
Calcium	*100000*	*101659*	*102*
Cerium		*0.0190*	
Iron	*100000*	*0.0000*	*0*
Magnesium	*100000*	*102062*	*102*
Manganese		*0.242*	
Potassium	*100000*	*101597*	*102*
Sodium	*100000*	*105450*	*105*
Sr		*4.75*	
Tin		*0.198*	
Uranium		*0.0190*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-J-2-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.2		2.0	U	80.0	99	75-125		6020
Arsenic	75.6		5.0	U	80.0	95	75-125		6020
Beryllium	89.2		11		80.0	98	75-125		6020
Cadmium	73.9		0.39	J	80.0	92	75-125		6020
Barium	243		160		80.0	110	75-125		6020
Chromium	73.7		2.0	U	80.0	92	75-125		6020
Copper	104		30		80.0	93	75-125		6020
Nickel	215		150		80.0	87	75-125		6020
Lead	74.9		0.26	J	80.0	93	75-125		6020
Selenium	76.0		0.79	J	80.0	94	75-125		6020
Cobalt	183		110		80.0	88	75-125		6020
Silver	76.7		0.32	J	80.0	95	75-125		6020
Thallium	75.9		0.36	J	80.0	94	75-125		6020
Zinc	373		310		80.0	83	75-125		6020
Molybdenum	71.9		0.72	J	80.0	89	75-125		6020
Vanadium	75.5		0.83	J	80.0	93	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/05/2013 End Date: 04/05/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-96433/2 IC	08:43	100		100		100		100		100	
STD1 440-96433/3 IC	08:46	99		98		99		98		101	
STD2 440-96433/4 IC	08:49	100		99		98		98		99	
STD3 440-96433/5 IC	08:52	99		100		100		100		100	
STD4 440-96433/6 IC	08:54	102		100		98		97		101	
ICV 440-96433/7	08:57	106		100		99		100		102	
ICB 440-96433/8	09:05	102		99		98		98		101	
CRI 440-96433/9	09:11	104		100		99		99		102	
CRI 440-96433/10	09:14	102		99		99		98		102	
CCV 440-96433/12	10:33	117		96		96		100		107	
CCB 440-96433/13	10:36	117		96		96		100		105	
ICSA 440-96433/14	10:39	90		92		90		90		100	
ICSAB 440-96433/15	10:41	87		90		89		87		98	
MB 440-96231/1-A	10:47	110		96		94		99		106	
LCS 440-96231/2-A	10:50	109		95		94		99		106	
240-22303-J-2-B MS	10:55	109		99		95		95		105	
240-22303-J-2-C MSD	10:58	112		96		94		96		104	
240-22303-J-2-A PDS	11:00	111		99		95		96		105	
CCV 440-96433/24	11:05			100		97		99		105	
CCB 440-96433/26	11:11	120		98		96		99		104	
240-22475-3	11:16	114		101		98		100		106	
240-22475-4	11:19	112		102		94		95		102	
240-22475-5	11:21	111		98		95		97		102	
240-22475-6	11:24	98		99		90		88		93	
240-22475-7	11:27	108		100		92		90		95	
240-22475-8	11:29	108		101		94		92		98	
240-22475-9	11:32	103		103		97		95		100	
CCV 440-96433/37	11:40	113		99		98		101		106	
CCB 440-96433/39	11:46	114		100		97		102		106	
440-42596-K-1-B SD	12:02	110		99		96		98		105	
CCV 440-96433/46	12:05	110		96		95		100		107	
CCB 440-96433/47	12:07	115		95		95		100		107	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/05/2013 End Date: 04/05/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-96469/2 IC	12:18	100		100		100		100		100	
STD1 440-96469/3 IC	12:20	102		99		99		99		100	
STD2 440-96469/4 IC	12:23	102		100		100		99		99	
STD3 440-96469/5 IC	12:26	102		99		99		99		101	
STD4 440-96469/6 IC	12:29	97		98		98		100		99	
ICV 440-96469/8	12:34	98		98		99		98		100	
ICB 440-96469/9	12:36	99		98		99		99		100	
CRI 440-96469/10	12:39	98		98		99		100		99	
CRI 440-96469/11	12:42	101		98		99		100		99	
ICSA 440-96469/12	12:44	77		95		94		90		95	
ICSAB 440-96469/13	12:47	76		94		94		90		94	
MB 440-96231/1-A	13:01	84		95		97		99		100	
LCS 440-96231/2-A	13:04	82		94		97		98		100	
240-22303-J-2-B MS	13:09	82		99		98		98		100	
240-22303-J-2-C MSD	13:12	81		98		96		96		99	
240-22303-J-2-A PDS	13:14	82		97		96		96		99	
CCV 440-96469/24	13:24	90		99		99		100		100	
CCB 440-96469/25	13:27	93		100		99		100		100	
240-22475-3	13:30	89		98		98		98		100	
240-22475-4	13:32	82		99		96		95		98	
240-22475-5	13:35	82		94		93		93		95	
240-22475-6	13:38	80		103		96		90		91	
240-22475-7	13:40	82		102		96		92		90	
240-22475-8	13:43	82		102		97		92		93	
240-22475-9	13:46	81		104		99		95		93	
CCV 440-96469/33	13:48	91		105		103		102		100	
CCB 440-96469/34	13:51	97		101		102		101		100	
440-42596-K-1-B SD	14:10	93		102		100		99		99	
CCV 440-96469/42	14:13	92		98		98		99		101	
CCB 440-96469/43	14:15	95		99		99		101		101	

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICSAB 440-96433/15 Instrument ID: ICPMS4

Lab File ID: 042ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**21.3**	**107**
Arsenic	**20.0**	**20.8**	**104**
Barium	**20.0**	**22.4**	**112**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.5**	**102**
Cobalt	**20.0**	**19.6**	**98**
Copper	**20.0**	**18.6**	**93**
Lead	**20.0**	**20.0**	**100**
Molybdenum	**2020**	**2117**	**105**
Nickel	**20.0**	**19.8**	**99**
Selenium	**20.0**	**20.9**	**105**
Silver	**20.0**	**19.7**	**99**
Thallium	**20.0**	**19.1**	**95**
Vanadium	**20.0**	**21.1**	**106**
Zinc	**20.0**	**28.9**	**144**
Aluminum	*100000*	*94215*	*94*
Calcium	*101000*	*100899*	*100*
Cerium	*20.0*	*22.4*	*112*
Iron	*100000*	*0.0000*	*0*
Magnesium	*101000*	*100468*	*100*
Manganese	*20.0*	*21.4*	*107*
Potassium	*101000*	*101002*	*100*
Sodium	*101000*	*104455*	*104*
Sr	*20.0*	*28.0*	*140*
Tin	*20.0*	*21.8*	*109*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22475-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 12:15 End Date: 04/05/2013 14:15

Lab Sample Id	D/F	Type	Time	Analytes: Be
RINSE 440-96469/1			12:15	
STD0 440-96469/2 IC	1		12:18	X
STD1 440-96469/3 IC	1		12:20	X
STD2 440-96469/4 IC	1		12:23	X
STD3 440-96469/5 IC	1		12:26	X
STD4 440-96469/6 IC	1		12:29	X
ZZZZZZ			12:31	
ICV 440-96469/8	1		12:34	X
ICB 440-96469/9	1		12:36	X
CRI 440-96469/10	1		12:39	X
CRI 440-96469/11	1		12:42	X
ICSA 440-96469/12	1		12:44	X
ICSAB 440-96469/13	1		12:47	X
RINSE 440-96469/14			12:58	
MB 440-96231/1-A	1	R	13:01	X
LCS 440-96231/2-A	1	R	13:04	X
ZZZZZZ			13:06	
240-22303-J-2-B MS	1	R	13:09	X
240-22303-J-2-C MSD	1	R	13:12	X
240-22303-J-2-A PDS	1	R	13:14	X
ZZZZZZ			13:17	
ZZZZZZ			13:19	
ZZZZZZ			13:22	
CCV 440-96469/24	1		13:24	X
CCB 440-96469/25	1		13:27	X
240-22475-3	1	R	13:30	X
240-22475-4	1	R	13:32	X
240-22475-5	1	R	13:35	X
240-22475-6	1	R	13:38	X
240-22475-7	1	R	13:40	X
240-22475-8	1	R	13:43	X
240-22475-9	1	R	13:46	X
CCV 440-96469/33	1		13:48	X
CCB 440-96469/34	1		13:51	X
ZZZZZZ			13:54	
ZZZZZZ			13:57	
ZZZZZZ			13:59	
ZZZZZZ			14:02	
ZZZZZZ			14:05	
ZZZZZZ			14:07	
440-42596-K-1-B SD ^5	5	R	14:10	X
CCV 440-96469/42	1		14:13	X

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-96469/8 04/05/2013 12:34				CCV 440-96469/24 04/05/2013 13:24				CCV 440-96469/33 04/05/2013 13:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	23.6		25.0	94	51.1		50.0	102	50.9		50.0	102
Antimony	23.1		25.0	92	52.8		50.0	106	51.6		50.0	103
Arsenic	24.3		25.0	97	50.5		50.0	101	50.0		50.0	100
Barium	24.9		25.0	100	51.6		50.0	103	50.5		50.0	101
Cadmium	24.5		25.0	98	51.3		50.0	103	50.2		50.0	100
Chromium	25.5		25.0	102	52.7		50.0	105	50.9		50.0	102
Cobalt	25.5		25.0	102	52.0		50.0	104	51.1		50.0	102
Copper	22.7		25.0	91	47.0		50.0	94	45.7		50.0	91
Molybdenum	22.9		25.0	92	47.9		50.0	96	47.1		50.0	94
Nickel	24.4		25.0	97	50.8		50.0	102	49.4		50.0	99
Selenium	24.3		25.0	97	49.9		50.0	100	49.8		50.0	100
Silver	23.4		25.0	93	52.5		50.0	105	51.4		50.0	103
Vanadium	25.8		25.0	103	51.8		50.0	104	51.1		50.0	102
Zinc	23.0		25.0	92	51.9		50.0	104	51.2		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96469/9 04/05/2013 12:36		CCB 440-96469/25 04/05/2013 13:27		CCB 440-96469/34 04/05/2013 13:51		CCB 440-96469/43 04/05/2013 14:15	
		Found	C	Found	C	Found	C	Found	C
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	0.116	J	0.134	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Molybdenum	2.0	2.0	U	0.344	J	0.252	J	0.279	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.255	J	0.312	J	0.272	J	0.265	J
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96231/1-A

Instrument Code: ICPMS4 Batch No.: 96469

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	1.0	U		6020

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-96231/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	80.0	81.1		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96469/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.925	J	93	50-150
Arsenic	1.00	0.960	J	96	50-150
Beryllium	0.500	0.478	J	96	50-150
Cadmium	0.500	0.501	J	100	50-150
Barium	1.00	0.988	J	99	50-150
Chromium	1.00	0.949	J	95	50-150
Copper	1.00	0.953	J	95	50-150
Nickel	1.00	0.913	J	91	50-150
Lead	1.00	0.927	J	93	50-150
Selenium	1.00	1.05	J	105	50-150
Cobalt	0.500	0.459	J	92	50-150
Silver	1.00	0.906	J	91	50-150
Thallium	1.00	0.906	J	91	50-150
Zinc	5.00	5.13	J	103	50-150
Molybdenum	1.00	0.918	J	92	50-150
Vanadium	2.00	1.92	J	96	50-150

Lab Sample ID: CRI 440-96469/11 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.88	J	94	50-150
Arsenic	2.00	2.06		103	50-150
Beryllium	1.00	0.963		96	50-150
Cadmium	1.00	1.01		101	50-150
Barium	2.00	2.07		103	50-150
Chromium	2.00	1.94	J	97	50-150
Copper	2.00	1.80	J	90	50-150
Nickel	2.00	1.95	J	97	50-150
Lead	2.00	1.88		94	50-150
Selenium	2.00	2.02		101	50-150
Cobalt	1.00	0.945	J	95	50-150
Silver	2.00	1.85		93	50-150
Thallium	2.00	1.83		92	50-150
Zinc	10.0	10.6	J	106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICSA 440-96469/12 Instrument ID: ICPMS4

Lab File ID: 012ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0100**	
Aluminum	*100000*	*93410*	*93*
Antimony		*0.270*	
Arsenic		*0.209*	
Barium		*0.207*	
Cadmium		*0.0600*	
Calcium	*100000*	*100228*	*100*
Cerium		*0.0190*	
Chromium		*1.36*	
Cobalt		*0.0460*	
Copper		*0.629*	
Iron	*100000*	*0.0000*	*0*
Lead		*0.0910*	
Magnesium	*100000*	*96239*	*96*
Manganese		*0.169*	
Molybdenum	*2000*	*2167*	*108*
Nickel		*0.703*	
Potassium	*100000*	*100572*	*101*
Selenium		*-0.102*	
Silver		*0.107*	
Sodium	*100000*	*105159*	*105*
Sr		*4.74*	
Thallium		*-0.0060*	
Tin		*0.132*	
Uranium		*0.0030*	
Vanadium		*0.115*	
Zinc		*14.7*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICSAB 440-96469/13 Instrument ID: ICPMS4

Lab File ID: 013ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Beryllium	**20.0**	**22.2**	**111**
Aluminum	*100000*	*90602*	*91*
Antimony	*20.0*	*20.5*	*103*
Arsenic	*20.0*	*20.8*	*104*
Barium	*20.0*	*22.2*	*111*
Cadmium	*20.0*	*20.6*	*103*
Calcium	*101000*	*99604*	*99*
Cerium	*20.0*	*22.3*	*112*
Chromium	*20.0*	*20.5*	*103*
Cobalt	*20.0*	*18.9*	*94*
Copper	*20.0*	*18.6*	*93*
Iron	*100000*	*0.0000*	*0*
Lead	*20.0*	*17.9*	*89*
Magnesium	*101000*	*96373*	*96*
Manganese	*20.0*	*21.0*	*105*
Molybdenum	*2020*	*2145*	*106*
Nickel	*20.0*	*21.2*	*106*
Potassium	*101000*	*100183*	*100*
Selenium	*20.0*	*20.0*	*100*
Silver	*20.0*	*19.5*	*98*
Sodium	*101000*	*103556*	*103*
Sr	*20.0*	*27.5*	*137*
Thallium	*20.0*	*17.7*	*88*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*18.9*	*94*
Vanadium	*20.0*	*21.5*	*107*
Zinc	*20.0*	*28.8*	*144*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ICIS 240-80191/1	1		09:47	X	X	X	X	X	X	X																							
CALSTD 240-80191/2 IC			09:51	X	X	X	X	X	X	X																							
CALSTD 240-80191/3 IC			09:55	X	X	X	X	X	X	X																							
ICV 240-80191/4	1		09:59	X	X	X	X	X	X	X																							
ICB 240-80191/5	1		10:03	X	X	X	X	X	X	X																							
CRI 240-80191/6	1		10:07							X																							
ZZZZZZ			10:11																													
ICSA 240-80191/8	1		10:15	X	X	X	X	X	X																							
ICSAB 240-80191/9	1		10:19	X	X	X	X	X	X																							
CCV 240-80191/10			10:23																													
CCB 240-80191/11			10:27																													
ZZZZZZ			10:31																													
ZZZZZZ			10:35																													
ZZZZZZ			10:39																													
ZZZZZZ			10:43																													
ZZZZZZ			10:47																													
ZZZZZZ			10:51																													
CCV 240-80191/18	1		10:55	X	X	X	X	X	X	X																							
CCB 240-80191/19	1		10:59	X	X	X	X	X	X	X																							
ZZZZZZ			12:12																													
ZZZZZZ			12:16																													
ZZZZZZ			12:20																													
CRI 240-80191/23	1		12:26	X	X	X	X	X	X																							
MB 240-79873/1-A	1	R	12:30	X	X	X	X	X	X	X																							
LCS 240-79873/2-A	1	R	12:34	X	X	X	X	X	X	X																							
240-22303-I-8-A SD ^5	5	R	12:38	X	X	X	X	X	X																							
240-22303-I-8-B MS	1	R	12:42	X	X	X	X	X	X																							
240-22303-I-8-C MSD	1	R	12:46	X	X	X	X	X	X																							
ZZZZZZ			12:49																													
CCV 240-80191/30	1		12:55	X	X	X	X	X	X	X																							
CCB 240-80191/31	1		12:59	X	X	X	X	X	X	X																							
EMPTY 240-80191/32			13:03																													
ZZZZZZ			13:07																													
240-22475-2	1	R	13:11	X	X	X	X	X	X	X																							
240-22475-3	1	R	13:15	X	X	X	X	X	X	X																							
ZZZZZZ			13:19																													
ZZZZZZ			13:36																													
EMPTY 240-80191/38			13:40																													
ZZZZZZ			14:05																													
ZZZZZZ			14:09																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

| Lab Sample Id | D/F | Type | Time | Analytes | | |

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22303-I-8-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-22475-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	18000		17800	J	2.5		6010C
Iron	390		1000	U	NC		6010C
Potassium	3100	J	3260	J	NC		6010C
Magnesium	3900	J	3930	J	0.10		6010C
Manganese	37		37.4	J	2.1		6010C
Sodium	12000		12200	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22475-1

SDG No.:

Instrument ID: I9 Date: 10/16/2012 17:26

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-80191/4 04/01/2013 09:59				CCV 240-80191/18 04/01/2013 10:55				CCV 240-80191/30 04/01/2013 12:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25600		25000	102	50400		50000	101	50500		50000	101
Iron	12900		12500	104	24800		25000	99	24600		25000	98
Magnesium	25400		25000	101	50400		50000	101	50000		50000	100
Manganese	1540		1500	103	1900		2000	95	1960		2000	98
Potassium	25100		25000	101	49600		50000	99	49800		50000	100
SiO2, Silica	6840		6420	107	11000		10700	103	11300		10700	105
Sodium	25300		25000	101	49400		50000	99	50200		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	CCV 240-80191/42 04/01/2013 14:19											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	51300		50000	103								
Iron	25100		25000	100								
Magnesium	51500		50000	103								
Manganese	1960		2000	98								
Potassium	50700		50000	101								
SiO2, Silica	11300		10700	106								
Sodium	50200		50000	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80191/5 04/01/2013 10:03		CCB 240-80191/19 04/01/2013 10:59		CCB 240-80191/31 04/01/2013 12:59		CCB 240-80191/43 04/01/2013 14:23	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U	5000	U
Iron	200	200	U	200	U	200	U	200	U
Magnesium	5000	5000	U	5000	U	5000	U	5000	U
Manganese	15	15	U	15	U	15	U	15	U
Potassium	5000	5000	U	5000	U	5000	U	5000	U
SiO2, Silica	1100	1100	U	1100	U	1100	U	1100	U
Sodium	5000	5000	U	5000	U	5000	U	5000	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-79873/1-A

Instrument Code: I9 Batch No.: 80191

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	139	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	39.8	J		6010C
7439-96-5	Manganese	2.06	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-79873/2-A

Lab Name: TestAmerica Canton Job No.: 240-22475-1

Sample Matrix: Water LCS Source: MTICP2A_00024

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	48200		96	80	120		6010C
Iron	1000	971		97	80	120		6010C
Potassium	50000	47400		95	80	120		6010C
Magnesium	50000	47500		95	80	120		6010C
Manganese	500	485		97	80	120		6010C
Sodium	50000	47800		96	80	120		6010C
SiO2, Silica	2140	2150		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-80191/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1070	J	100	70-130

Lab Sample ID: CRI 240-80191/23 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	4980	J	100	70-130
Iron	200	201		101	70-130
Potassium	5000	4920	J	98	70-130
Magnesium	5000	5030		101	70-130
Manganese	15.0	15.2		101	70-130
Sodium	5000	5030		101	70-130

Lab Sample ID: CRI 240-80191/44 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5080		102	70-130
Iron	200	207		104	70-130
Potassium	5000	5060		101	70-130
Magnesium	5000	5230		105	70-130
Manganese	15.0	15.4		102	70-130
Sodium	5000	5060		101	70-130

Lab Sample ID: CRI 240-80191/45 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1080	J	101	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-I-8-B MS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	66000		18000		50000	95	75-125		6010C
Iron	1380		390		1000	99	75-125		6010C
Potassium	51500		3100	J	50000	97	75-125		6010C
Magnesium	52500		3900	J	50000	97	75-125		6010C
Manganese	530		37		500	99	75-125		6010C
Sodium	60500		12000		50000	96	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-I-8-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	66200		50000	96	75-125	0	20		6010C
Iron	1370		1000	98	75-125	1	20		6010C
Potassium	51000		50000	96	75-125	1	20		6010C
Magnesium	51900		50000	96	75-125	1	20		6010C
Manganese	519		500	96	75-125	2	20		6010C
Sodium	60200		50000	96	75-125	0	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICSA 240-80191/8 Instrument ID: I9

Lab File ID: I9040113A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Calcium	**500000**	**471560**	**94**
Iron	**200000**	**184480**	**92**
Magnesium	**500000**	**490200**	**98**
Manganese		**2.89**	
Potassium		**141**	
Sodium		**45.3**	
Aluminum	*500000*	*495420*	*99*
Antimony		*-5.16*	
Arsenic		*-2.18*	
Barium		*0.0917*	
Beryllium		*-0.372*	
Boron		*0.734*	
Cadmium		*0.655*	
Chromium		*2.79*	
Cobalt		*-1.22*	
Copper		*-2.74*	
Lead		*4.40*	
Lithium		*-26.7*	
Molybdenum		*-2.02*	
Nickel		*1.98*	
Selenium		*5.12*	
Silicon		*-3.68*	
Silver		*-0.697*	
Strontium		*7.08*	
Thallium		*-2.82*	
Tin		*5.55*	
Titanium		*-0.563*	
Vanadium		*-1.82*	
Zinc		*10.5*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: ICSAB 240-80191/9 Instrument ID: I9

Lab File ID: I9040113A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**478460**	**96**
Iron	**200000**	**190960**	**95**
Magnesium	**500000**	**505750**	**101**
Manganese	**500**	**492**	**98**
Potassium	**10000**	**10478**	**105**
Sodium	**10000**	**10497**	**105**
Aluminum	*500000*	*511460*	*102*
Antimony	*1000*	*1016*	*102*
Arsenic	*1000*	*1019*	*102*
Barium	*500*	*487*	*97*
Beryllium	*500*	*487*	*97*
Boron	*500*	*508*	*102*
Cadmium	*1000*	*1020*	*102*
Chromium	*500*	*481*	*96*
Cobalt	*500*	*490*	*98*
Copper	*500*	*526*	*105*
Lead	*1000*	*912*	*91*
Lithium	*500*	*505*	*101*
Molybdenum	*1000*	*975*	*97*
Nickel	*1000*	*976*	*98*
Selenium	*1000*	*996*	*100*
Silicon	*10000*	*9933*	*99*
Silver	*1000*	*1100*	*110*
Strontium	*1500*	*1463*	*98*
Thallium	*1000*	*954*	*95*
Tin	*500*	*508*	*102*
Titanium	*500*	*514*	*103*
Vanadium	*500*	*480*	*96*
Zinc	*1000*	*1002*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/04/2013 10:33 End Date: 04/04/2013 12:59

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-80601/1-A			10:33	X
IC 240-80601/2-A			10:35	X
IC 240-80601/3-A			10:36	X
IC 240-80601/4-A			10:37	X
IC 240-80601/5-A			10:39	X
IC 240-80601/6-A			10:40	X
ICV 240-80601/7-A	1		10:42	X
ICB 240-80601/8-A	1		10:44	X
CRA 240-80601/9-A	1		10:45	X
CCVL 240-80601/10-A	1		10:46	X
CCB 240-80601/11-A			10:47	
ZZZZZZ			10:49	
ZZZZZZ			10:50	
ZZZZZZ			10:52	
ZZZZZZ			10:53	
ZZZZZZ			10:55	
ZZZZZZ			10:56	
ZZZZZZ			10:58	
ZZZZZZ			10:59	
CCV 240-80601/12-A			11:01	
CCB 240-80601/11-A			11:02	
ZZZZZZ			11:04	
ZZZZZZ			11:06	
ZZZZZZ			11:07	
ZZZZZZ			11:09	
ZZZZZZ			11:10	
ZZZZZZ			11:12	
ZZZZZZ			11:14	
ZZZZZZ			11:15	
ZZZZZZ			11:16	
ZZZZZZ			11:18	
CCV 240-80601/12-A	1		11:19	X
CCB 240-80601/11-A	1		11:20	X
ZZZZZZ			11:22	
ZZZZZZ			11:23	
ZZZZZZ			11:25	
ZZZZZZ			11:27	
MB 240-80390/1-A	1	T	11:28	X
LCS 240-80390/2-A	1	T	11:29	X
ZZZZZZ			11:31	
240-22439-A-6-E MS	1	T	11:32	X
240-22439-A-6-F MSD	1	T	11:34	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/04/2013 10:33 End Date: 04/04/2013 12:59

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			11:35	
CCV 240-80601/12-A	1		11:36	X
CCB 240-80601/11-A	1		11:38	X
ZZZZZZ			11:40	
ZZZZZZ			11:42	
ZZZZZZ			11:43	
ZZZZZZ			11:44	
ZZZZZZ			11:46	
ZZZZZZ			11:47	
ZZZZZZ			11:49	
ZZZZZZ			11:50	
ZZZZZZ			11:52	
ZZZZZZ			11:53	
CCV 240-80601/12-A	1		11:54	X
CCB 240-80601/11-A	1		11:56	X
240-22475-2	1	T	11:57	X
240-22475-3	1	T	11:59	X
ZZZZZZ			12:00	
ZZZZZZ			12:01	
ZZZZZZ			12:03	
ZZZZZZ			12:04	
ZZZZZZ			12:06	
ZZZZZZ			12:07	
ZZZZZZ			12:09	
ZZZZZZ			12:10	
CCV 240-80601/12-A	1		12:12	X
CCB 240-80601/11-A	1		12:13	X
ZZZZZZ			12:14	
ZZZZZZ			12:16	
ZZZZZZ			12:17	
ZZZZZZ			12:19	
ZZZZZZ			12:20	
ZZZZZZ			12:21	
ZZZZZZ			12:23	
ZZZZZZ			12:24	
ZZZZZZ			12:26	
ZZZZZZ			12:28	
CCV 240-80601/12-A			12:29	
CCB 240-80601/11-A			12:31	
ZZZZZZ			12:32	
ZZZZZZ			12:33	
ZZZZZZ			12:35	

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00347

Analyte	ICV 240-80601/7-A 04/04/2013 10:42				CCVL 240-80601/10-A 04/04/2013 10:46				CCV 240-80601/12-A 04/04/2013 11:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.33		2.50	93	5.07		5.00	101	4.95		5.00	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00347

Analyte	CCV 240-80601/12-A 04/04/2013 11:36				CCV 240-80601/12-A 04/04/2013 11:54				CCV 240-80601/12-A 04/04/2013 12:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.92		5.00	98	5.02		5.00	100	5.01		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Method: 7470A Instrument ID: H1

Lab Sample ID: CRA 240-80601/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00347

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.234		117	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80601/8-A 04/04/2013 10:44		CCB 240-80601/11-A 04/04/2013 11:20		CCB 240-80601/11-A 04/04/2013 11:38		CCB 240-80601/11-A 04/04/2013 11:56	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-80601/11-A 04/04/2013 12:13 Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-80390/1-A

Instrument Code: H1 Batch No.: 80598

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-80390/2-A

Lab Name: TestAmerica Canton Job No.: 240-22475-1

Sample Matrix: Water LCS Source: MTHGCALW_00346

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.58		92	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/16/2013 18:11 End Date: 04/16/2013 20:12

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-98554/6-A	1		18:11	X
IC 440-98554/7-A	1		18:14	X
IC 440-98554/8-A	1		18:16	X
IC 440-98554/9-A	1		18:19	X
IC 440-98554/10-A	1		18:21	X
IC 440-98554/11-A	1		18:24	X
ICV 440-98554/1-A	1		18:27	X
ICB 440-98554/2-A	1		18:29	X
CRA 440-98554/5-A	1		18:32	X
ZZZZZZ			18:34	
ZZZZZZ			18:37	
ZZZZZZ			18:39	
ZZZZZZ			18:42	
ZZZZZZ			18:44	
ZZZZZZ			18:47	
ZZZZZZ			18:49	
ZZZZZZ			18:52	
ZZZZZZ			18:54	
ZZZZZZ			18:56	
CCV 440-98554/3-A	1		18:59	X
CCB 440-98554/4-A	1		19:01	X
MB 440-98546/1-A	1	T	19:04	X
LCS 440-98546/2-A	1	T	19:06	X
240-22475-4	1	T	19:09	X
240-22475-4 MS	1	T	19:11	X
240-22475-4 MSD	1	T	19:14	X
240-22475-5	1	T	19:16	X
240-22475-6	1	T	19:19	X
240-22475-7	1	T	19:22	X
240-22475-8	1	T	19:24	X
CCV 440-98554/3-A	1		19:27	X
CCB 440-98554/4-A	1		19:29	X
240-22475-9	1	T	19:32	X
ZZZZZZ			19:34	
ZZZZZZ			19:37	
ZZZZZZ			19:39	
ZZZZZZ			19:42	
ZZZZZZ			19:44	
ZZZZZZ			19:47	
ZZZZZZ			19:49	
CCV 440-98554/3-A	1		19:52	X
CCB 440-98554/4-A	1		19:54	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/16/2013 18:11 End Date: 04/16/2013 20:12

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			19:57	
ZZZZZZ			19:59	
ZZZZZZ			20:02	
ZZZZZZ			20:04	
CCV 440-98554/3-A			20:07	
CCB 440-98554/4-A			20:09	
CRA 440-98554/5-A	1		20:12	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	ICV 440-98554/1-A 04/16/2013 18:27				CCV 440-98554/3-A 04/16/2013 18:59				CCV 440-98554/3-A 04/16/2013 19:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.35		8.00	92	4.04		4.00	101	3.99		4.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	CCV 440-98554/3-A 04/16/2013 19:52											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.14		4.00	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-98554/2-A 04/16/2013 18:29		CCB 440-98554/4-A 04/16/2013 19:01		CCB 440-98554/4-A 04/16/2013 19:29		CCB 440-98554/4-A 04/16/2013 19:54	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98546/1-A

Instrument Code: CV-HG3 Batch No.: 98681

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-98546/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00077

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	7.92		99	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW29A-032613 MS Lab ID: 240-22475-4 MS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	7.18		0.15	J	8.00	88	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW29A-032613 MSD
Lab ID: 240-22475-4 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22475-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.35	8.00	90	70-130	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22475-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-98554/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.194	J	97	50-150

Lab Sample ID: CRA 440-98554/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.191	J	96	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22439-A-6-E MS

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C	Sample Result (SR) C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.688	0.30	1.00	39	69-134	F	7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22439-A-6-F MSD

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.718	1.00	42	69-134	4	20	F	7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22475-1

SDG No.:

Instrument ID: H1 Date: 04/01/2011 10:45

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW72B-032613	240-22475-2
MRC-MW37A-032613	240-22475-3

Comments:

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 02/19/2013 16:33 End Date: 02/19/2013 20:19

Lab Sample Id	D/F	Type	Time	Analytes																												
				CL-	SO4																											
ZZZZZZ			16:33																													
ZZZZZZ			16:50																													
STD1 240-75854/3 IC	1		17:07	X	X																											
STD2 240-75854/4 IC	1		17:25	X	X																											
STD3 240-75854/5 IC	1		17:42	X	X																											
STD4 240-75854/6 IC	1		18:00	X	X																											
STD5 240-75854/7 ICRT	1		18:17	X	X																											
STD6 240-75854/8 IC	1		18:34	X	X																											
STD7 240-75854/9 IC	1		18:52	X	X																											
STD8 240-75854/10 IC	1		19:09	X	X																											
STD9 240-75854/11 IC	1		19:27	X	X																											
ZZZZZZ			19:44																													
ICV 240-75854/13	1		20:01	X	X																											
ICB 240-75854/14			20:19																													

Prep Types:
=

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Analyst: LG Batch Start Date: 02/19/2013

Reporting Units: mg/L Analytical Batch No.: 75854

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:01	Chloride	51.6	50.0	103	90-110		WCICLCS_00162
			Sulfate	49.5	50.0	99	90-110		WCICLCS_00162

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/05/2013 11:12 End Date: 04/06/2013 10:54

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
RINSE 240-80760/1			11:12		
CCV 240-80760/2			11:29		
CCB 240-80760/3			11:47		
ZZZZZZ			12:04		
ZZZZZZ			12:21		
ZZZZZZ			12:39		
ZZZZZZ			12:56		
ZZZZZZ			13:13		
ZZZZZZ			13:31		
ZZZZZZ			13:48		
ZZZZZZ			14:06		
ZZZZZZ			14:23		
ZZZZZZ			14:40		
CCV 240-80760/14			14:58		
CCB 240-80760/15			15:15		
ZZZZZZ			15:33		
ZZZZZZ			15:50		
ZZZZZZ			16:07		
ZZZZZZ			16:38		
ZZZZZZ			16:55		
CCV 240-80760/21			17:13		
CCB 240-80760/22			17:30		
ZZZZZZ			17:48		
ZZZZZZ			18:05		
ZZZZZZ			18:22		
ZZZZZZ			18:40		
CCV 240-80760/27	1		18:57	X	X
* CCB 240-80760/28	1		19:15	X	X
MB 240-80760/29	1	T	19:32	X	X
LCS 240-80760/30	1	T	19:49		X
ZZZZZZ			20:07		
ZZZZZZ			20:24		
ZZZZZZ			20:42		
ZZZZZZ			20:59		
ZZZZZZ			21:16		
ZZZZZZ			21:34		
ZZZZZZ			21:51		
ZZZZZZ			22:09		
CCV 240-80760/39	1		22:26		X
CCB 240-80760/40	1		22:43		X
ZZZZZZ			23:01		

FORM XIII-IN

* Cl⁻ CCB hit / Not used Samples for $SO_4^=$ only

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/05/2013 11:12 End Date: 04/06/2013 10:54

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
ZZZZZZ			23:18		
ZZZZZZ			23:36		
ZZZZZZ			23:53		
ZZZZZZ			00:10		
240-22475-2	1	T	00:28		X
240-22475-3	1	T	00:45		X
ZZZZZZ			01:03		
ZZZZZZ			01:20		
ZZZZZZ			01:37		
CCV 240-80760/51	1		01:55		X
CCB 240-80760/52	1		02:12		X
ZZZZZZ			02:29		
ZZZZZZ			02:47		
ZZZZZZ			03:04		
ZZZZZZ			03:22		
ZZZZZZ			03:39		
ZZZZZZ			03:57		
ZZZZZZ			04:14		
ZZZZZZ			04:31		
ZZZZZZ			04:49		
ZZZZZZ			05:06		
CCV 240-80760/63			05:24		
CCB 240-80760/64			05:41		
ZZZZZZ			05:58		
ZZZZZZ			06:16		
ZZZZZZ			06:33		
ZZZZZZ			06:51		
ZZZZZZ			07:08		
ZZZZZZ			07:25		
ZZZZZZ			07:43		
ZZZZZZ			08:00		
ZZZZZZ			08:17		
ZZZZZZ			08:35		
CCV 240-80760/75			08:52		
CCB 240-80760/76			09:10		
ZZZZZZ			09:27		
ZZZZZZ			09:44		
ZZZZZZ			10:02		
ZZZZZZ			10:19		
CCV 240-80760/81			10:37		
CCB 240-80760/82			10:54		

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Analyst: LG Batch Start Date: 04/05/2013

Reporting Units: mg/L Analytical Batch No.: 80760

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
27	CCV	18:57	Chloride	55.0	50.0	110	90-110		WCICCCV_00257
			Sulfate	53.5	50.0	107	90-110		WCICCCV_00257
28	CCB	19:15	Chloride	0.155				J	
			Sulfate	1.0				U	
39	CCV	22:26	Sulfate	53.8	50.0	108	90-110		WCICCCV_00257
40	CCB	22:43	Sulfate	1.0				U	
51	CCV	01:55	Sulfate	54.1	50.0	108	90-110		WCICCCV_00257
52	CCB	02:12	Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/08/2013 13:29 End Date: 04/08/2013 23:03

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
RINSE 240-81024/1			13:29		
CCV 240-81024/2	1		13:46	X	X
CCB 240-81024/3	1		14:03	X	X
MB 240-81024/4	1	T	14:21	X	X
LCS 240-81024/5	1	T	14:38	X	X
ZZZZZZ			14:56		
ZZZZZZ			15:13		
ZZZZZZ			15:30		
ZZZZZZ			15:48		
ZZZZZZ			16:05		
ZZZZZZ			16:23		
ZZZZZZ			16:40		
ZZZZZZ			16:57		
CCV 240-81024/14	1		17:15	X	X
* CCB 240-81024/15	1		17:32	X	X
ZZZZZZ			17:50		
240-22475-2	1	T	18:07	X	
240-22475-2 MS	1	T	18:24	X	X
240-22475-3	1	T	18:42	X	
ZZZZZZ			18:59		
ZZZZZZ			19:17		
ZZZZZZ			19:34		
ZZZZZZ			19:51		
ZZZZZZ			20:09		
ZZZZZZ			20:26		
CCV 240-81024/26	1		20:43	X	X
CCB 240-81024/27	1		21:01	X	X
ZZZZZZ			21:18		
ZZZZZZ			21:36		
ZZZZZZ			21:53		
ZZZZZZ			22:10		
ZZZZZZ			22:28		
CCV 240-81024/33			22:45		
CCB 240-81024/34			23:03		

Prep Types:
T = Total/NA

* Cl^- pos. for CCB

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Analyst: LG Batch Start Date: 04/08/2013

Reporting Units: mg/L Analytical Batch No.: 81024

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
2	CCV	13:46	Chloride	54.5	50.0	109	90-110		WCICCCV_00257
			Sulfate	53.3	50.0	107	90-110		WCICCCV_00257
3	CCB	14:03	Chloride	1.0				U	
			Sulfate	1.0				U	
14	CCV	17:15	Chloride	54.5	50.0	109	90-110		WCICCCV_00257
			Sulfate	53.3	50.0	107	90-110		WCICCCV_00257
* 15	CCB	17:32	Chloride	0.163				J	
			Sulfate	1.0				U	
26	CCV	20:43	Chloride	54.6	50.0	109	90-110		WCICCCV_00257
			Sulfate	53.3	50.0	107	90-110		WCICCCV_00257
27	CCB	21:01	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 03/28/2013 00:38 End Date: 03/28/2013 06:23

Lab Sample Id	D/F	Type	Time	Analytes		
				N-No2	NO3	Orthophosp
CCV 240-79687/1	1		00:38	X	X	X
CCB 240-79687/2	1		00:55	X	X	X
MB 240-79687/3	1	T	01:11	X	X	X
LCS 240-79687/4	1	T	01:27	X	X	X
ZZZZZZ			01:44			
ZZZZZZ			02:00			
ZZZZZZ			02:17			
ZZZZZZ			02:33			
ZZZZZZ			02:49			
ZZZZZZ			03:06			
ZZZZZZ			03:22			
ZZZZZZ			03:39			
CCV 240-79687/13	1		03:55	X	X	X
CCB 240-79687/14	1		04:12	X	X	X
ZZZZZZ			04:28			
ZZZZZZ			04:44			
ZZZZZZ			05:01			
240-22475-3	1	T	05:17	X	X	X
240-22475-3 MS	1	T	05:34	X	X	X
240-22475-2	1	T	05:50	X	X	X
CCV 240-79687/21	1		06:06	X	X	X
CCB 240-79687/22	1		06:23	X	X	X

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Analyst: AM Batch Start Date: 03/28/2013

Reporting Units: mg/L Analytical Batch No.: 79687

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	00:38	Nitrite as N	2.42	2.50	97	90-110		WCICCCV_00254
			Nitrate as N	2.45	2.50	98	90-110		WCICCCV_00254
			Orthophosphate as P	2.55	2.50	102	90-110		WCICCCV_00254
2	CCB	00:55	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
13	CCV	03:55	Nitrite as N	2.29	2.50	92	90-110		WCICCCV_00254
			Nitrate as N	2.45	2.50	98	90-110		WCICCCV_00254
			Orthophosphate as P	2.58	2.50	103	90-110		WCICCCV_00254
14	CCB	04:12	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
21	CCV	06:06	Nitrite as N	2.43	2.50	97	90-110		WCICCCV_00254
			Nitrate as N	2.51	2.50	101	90-110		WCICCCV_00254
			Orthophosphate as P	2.74	2.50	110	90-110		WCICCCV_00254
22	CCB	06:23	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/03/2013 10:52 End Date: 04/03/2013 16:13

Lab Sample Id	D/F	Type	Time	Analytes: NH3
IC 240-80480/1			10:52	X
IC 240-80480/2			10:52	X
IC 240-80480/3			10:52	X
IC 240-80480/4			10:52	X
ICV 240-80480/5	10		10:52	X
ICB 240-80480/6	1		10:52	X
MB 240-80480/7	1	T	11:01	X
LCS 240-80480/8	10	T	11:06	X
ZZZZZZ			13:36	
ZZZZZZ			13:36	
ZZZZZZ			13:37	
ZZZZZZ			13:37	
ZZZZZZ			13:37	
ZZZZZZ			13:37	
240-22311-F-8 MS	1	T	13:40	X
240-22311-F-8 MSD	1	T	13:40	X
CCV 240-80480/17	1		13:42	X
CCB 240-80480/18	1		15:04	X
ZZZZZZ			15:04	
ZZZZZZ			15:04	
ZZZZZZ			15:04	
ZZZZZZ			15:04	
240-22475-2	1	T	15:05	X
240-22475-3	1	T	15:05	X
ZZZZZZ			15:05	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
CCV 240-80480/29	1		15:11	X
CCB 240-80480/30	1		15:58	X
ZZZZZZ			15:58	
ZZZZZZ			15:58	
ZZZZZZ			15:58	
ZZZZZZ			15:58	
CCV 240-80480/35			15:59	
CCB 240-80480/36			16:13	

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Analyst: JK Batch Start Date: 04/03/2013

Reporting Units: mg/L Analytical Batch No.: 80480

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	10:52	Ammonia (as N)	9.70	8.93	109	90-110		WCSIMP192-505_00001
6	ICB	10:52	Ammonia (as N)	0.0521				J	
17	CCV	13:42	Ammonia (as N)	2.54	2.50	102	90-110		WCNH31000_00021
18	CCB	15:04	Ammonia (as N)	0.0376				J	
29	CCV	15:11	Ammonia (as N)	2.64	2.50	106	90-110		WCNH31000_00021
30	CCB	15:58	Ammonia (as N)	0.0544				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/06/2013 11:32 End Date: 04/06/2013 15:23

Lab Sample Id	D/F	Type	Time	Analytes: DOC
CCV 240-80877/1	1		11:32	X
CCB 240-80877/2	1		11:43	X
MB 240-80877/3	1	D	11:54	X
LCS 240-80877/4	1	D	12:05	X
ZZZZZZ			12:16	
240-22303-F-8 MS	2	D	12:57	X
ZZZZZZ			13:08	
240-22475-2	1	D	13:49	X
240-22475-3	1	D	14:31	X
CCV 240-80877/10	1		15:12	X
CCB 240-80877/11	1		15:23	X

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Analyst: TH Batch Start Date: 04/06/2013

Reporting Units: mg/L Analytical Batch No.: 80877

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:32	Dissolved Organic Carbon	26.7	25.0	107	90-110		WC TOC CCV_00127
2	CCB	11:43	Dissolved Organic Carbon	1.0				U	
10	CCV	15:12	Dissolved Organic Carbon	26.8	25.0	107	90-110		WC TOC CCV_00127
11	CCB	15:23	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/03/2013 16:59 End Date: 04/03/2013 22:26

Lab Sample Id	D/F	Type	Time	Analytes: Alk
ZZZZZZ			16:59	
ZZZZZZ			17:08	
ZZZZZZ			17:20	
LCS 240-80574/4	1	T	17:28	X
MB 240-80574/5	1	T	17:35	X
ZZZZZZ			17:38	
ZZZZZZ			17:59	
ZZZZZZ			18:15	
ZZZZZZ			18:58	
ZZZZZZ			19:10	
ZZZZZZ			19:16	
ZZZZZZ			19:22	
190-329-B-2 MS	1	T	19:30	X
190-329-B-2 MSD	1	T	19:39	X
ZZZZZZ			19:48	
ZZZZZZ			19:53	
ZZZZZZ			19:57	
ZZZZZZ			20:03	
ZZZZZZ			20:11	
ZZZZZZ			20:17	
ZZZZZZ			20:23	
ZZZZZZ			20:31	
ZZZZZZ			20:41	
240-22437-E-4 DU	1	T	20:51	X
ZZZZZZ			21:00	
ZZZZZZ			21:07	
ZZZZZZ			21:17	
ZZZZZZ			21:20	
ZZZZZZ			21:27	
ZZZZZZ			21:56	
240-22475-2	1	T	22:02	X
240-22475-3	1	T	22:09	X
ZZZZZZ			22:15	
ZZZZZZ			22:22	
ZZZZZZ			22:26	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 03/29/2013 08:50 End Date: 03/29/2013 08:50

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-79895/1	1	T	08:50	X
LCS 240-79895/2	1	T	08:50	X
240-22475-2 DU	1	T	08:50	X
240-22475-2	1	T	08:50	X
240-22475-3	1	T	08:50	X
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
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ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	

Prep Types:
T = Total/NA

FORM XIII-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 79895	Date: 03/29/2013 08:50						
160.1	MB 240-79895/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID: 79687	Date: 03/28/2013 01:11						
300.0	MB 240-79687/3	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79687/3	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79687/3	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID: 80760	Date: 04/05/2013 19:32						
300.0	MB 240-80760/29	Chloride for $SO_4^{=}$ N/A	0.144	J	mg/L	1.0	1
300.0	MB 240-80760/29	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 81024	Date: 04/08/2013 14:21						
300.0	MB 240-81024/4	Chloride for Cl^-	1.0	U	mg/L	1.0	1
300.0	MB 240-81024/4	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 80574	Date: 04/03/2013 17:35						
310.1	MB 240-80574/5	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID: 80480	Date: 04/03/2013 11:01						
350.3	MB 240-80480/7	Ammonia (as N)	0.0752	J	mg/L	0.20	1
Batch ID: 80877	Date: 04/06/2013 11:54						
9060	MB 240-80877/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79895		Date: 03/29/2013 08:50									
						LCS Source: WCWIBBYSOLIDS_00002					
160.1	LCS 240-79895/2	Total Dissolved Solids	194		mg/L	206	94	88-110			
Batch ID: 79687		Date: 03/28/2013 01:27									
						LCS Source: WCICLCS_00171					
300.0	LCS 240-79687/4	Nitrite as N	2.42		mg/L	2.50	97	90-110			
300.0	LCS 240-79687/4	Nitrate as N	2.51		mg/L	2.50	101	90-110			
300.0	LCS 240-79687/4	Orthophosphate as P	2.62		mg/L	2.50	105	90-110			
Batch ID: 80760		Date: 04/05/2013 19:49									
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80760/30	Sulfate	53.9		mg/L	50.0	108	90-110			
Batch ID: 81024		Date: 04/08/2013 14:38									
						LCS Source: WCICLCS_00175					
300.0	LCS 240-81024/5	Chloride	54.8		mg/L	50.0	110	90-110			
300.0	LCS 240-81024/5	Sulfate	53.4		mg/L	50.0	107	90-110			
Batch ID: 80574		Date: 04/03/2013 17:28									
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-80574/4	Alkalinity	83.9		mg/L	79.5	105	90-127			
Batch ID: 80480		Date: 04/03/2013 11:06									
						LCS Source: WCSIMP192-505_00001					
350.3	LCS 240-80480/8	Ammonia (as N)	9.45		mg/L	8.93	106	85-114			
Batch ID: 80877		Date: 04/06/2013 12:05									
						LCS Source: WC LCS_00006					
9060	LCS 240-80877/4	Dissolved Organic Carbon	25.8		mg/L	24.1	107	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	79895	Date: 03/29/2013 08:50						
160.1	MRC-MW72B-032613	240-22475-2	Total Dissolved Solids	15	mg/L			
160.1	MRC-MW72B-032613	240-22475-2 DU	Total Dissolved Solids	13.0	mg/L	14	20	
Batch ID:	80574	Date: 04/03/2013 20:51						
310.1		240-22437-E-4	Alkalinity	230	mg/L			
310.1		240-22437-E-4 DU	Alkalinity	246	mg/L	5	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79687	Date: 03/28/2013 05:34										
300.0	240-22475-3	Nitrite as N	0.10	U	mg/L						
300.0	240-22475-3 MS	Nitrite as N	2.20		mg/L	2.50	88	80-120			
300.0	240-22475-3	Nitrate as N	0.95		mg/L						
300.0	240-22475-3 MS	Nitrate as N	3.81		mg/L	2.50	114	80-120			
300.0	240-22475-3	Orthophosphate as P	0.50	U	mg/L						
300.0	240-22475-3 MS	Orthophosphate as P	7.28		mg/L	2.50	291	80-120			F
Batch ID: 81024	Date: 04/08/2013 18:24										
300.0	240-22475-2	Chloride	15		mg/L						
300.0	240-22475-2 MS	Chloride	77.0		mg/L	50.0	124	80-120			F
300.0	240-22475-2	Sulfate	1.0		mg/L						
300.0	240-22475-2 MS	Sulfate	58.3		mg/L	50.0	114	80-120			
Batch ID: 80574	Date: 04/03/2013 19:30										
310.1	190-329-B-2	Alkalinity	22		mg/L						
310.1	190-329-B-2 MS	Alkalinity	85.7		mg/L	500	13	10-160			
Batch ID: 80480	Date: 04/03/2013 13:40										
350.3	240-22311-F-8	Ammonia (as N)	0.12	J	mg/L						B
350.3	240-22311-F-8 MS	Ammonia (as N)	2.61		mg/L	2.50	100	75-125			
Batch ID: 80877	Date: 04/06/2013 12:57										
9060	240-22303-F-8	Dissolved Organic Carbon	3.8		mg/L						
9060	240-22303-F-8 MS	Dissolved Organic Carbon	30.7		mg/L	25.0	108	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80574		Date: 04/03/2013 19:39									
310.1	190-329-B-2 MSD	Alkalinity	86.8		mg/L	500	13	10-160	1	24	
Batch ID: 80480		Date: 04/03/2013 13:40									
350.3	240-22311-F-8 MSD	Ammonia (as N)	2.66		mg/L	2.50	102	75-125	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22475-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

VOC CALCULATION	SAMPLE		
	MRC-MW-53B-032613		
TARGET ANALYTE	TRICHLOROETHENE		
ANALYTE RESPONSE	1819924		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1793893		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.2819		
DILUTION FACTOR (DF)	5.714		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	205.64	µg/L

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 | Lab Sample ID: 240-22475-7

Matrix: Water | Lab File ID: UXR4832.D

Analysis Method: 8260B | Date Collected: 03/26/2013 12:21

Sample wt/vol: 5(mL) | Date Analyzed: 04/03/2013 16:35

Soil Aliquot Vol: | Dilution Factor: 5.714

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80415 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	29	U	29	0.63
87-68-3	Hexachlorobutadiene	5.7	U	5.7	1.7
591-78-6	2-Hexanone	29	U	29	2.3
98-82-8	Isopropylbenzene	5.7	U	5.7	0.74
75-09-2	Methylene Chloride	5.7	U	5.7	1.9
108-10-1	4-Methyl-2-pentanone	29	U	29	1.8
1634-04-4	Methyl tert-butyl ether	5.7	U	5.7	0.97
179601-23-1	m-Xylene & p-Xylene	11	U	11	1.4
91-20-3	Naphthalene	5.7	U	5.7	1.4
104-51-8	n-Butylbenzene	5.7	U	5.7	0.69
103-65-1	n-Propylbenzene	5.7	U	5.7	0.80
95-47-6	o-Xylene	5.7	U	5.7	0.80
99-87-6	p-Isopropyltoluene	5.7	U	5.7	0.69
135-98-8	sec-Butylbenzene	5.7	U	5.7	0.74
100-42-5	Styrene	5.7	U	5.7	0.63
994-05-8	Tert-amyl-methyl ether (TAME)	29	U	29	0.38
75-65-0	tert-Butyl alcohol	110	U	110	22
98-06-6	tert-Butylbenzene	5.7	U	5.7	0.74
630-20-6	1,1,1,2-Tetrachloroethane	5.7	U	5.7	1.3
79-34-5	1,1,2,2-Tetrachloroethane	5.7	U	5.7	1.0
127-18-4	Tetrachloroethene	5.7	U	5.7	1.7
108-88-3	Toluene	5.7	U	5.7	0.74
156-60-5	trans-1,2-Dichloroethene	5.7	U	5.7	1.1
10061-02-6	trans-1,3-Dichloropropene	5.7	U	5.7	1.1
87-61-6	1,2,3-Trichlorobenzene	5.7	U	5.7	0.97
120-82-1	1,2,4-Trichlorobenzene	5.7	U	5.7	0.86
71-55-6	1,1,1-Trichloroethane	5.7	U	5.7	1.3
79-01-6	Trichloroethene	210		5.7	0.97
75-69-4	Trichlorofluoromethane	5.7	U	5.7	1.2
96-18-4	1,2,3-Trichloropropane	5.7	U	5.7	2.5
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	5.7	U	5.7	1.6
526-73-8	1,2,3-Trimethylbenzene	29	U	29	0.034
95-63-6	1,2,4-Trimethylbenzene	5.7	U	5.7	0.69
108-05-4	Vinyl acetate	11	U	11	1.1
75-01-4	Vinyl chloride	5.7	U	5.7	1.3

Report Date: 04-Apr-2013 08:08:20 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\NCCHROM\ChromData\A3UX17\20130403-18508.b\UXR4832.D
Lims ID: 240-22475-B-7 Client ID: MRC-MW-53B-032613
Inject. Date: 03-Apr-2013 16:35:30 Dil. Factor: 5.7140
Sample Type: Client
Sample ID: 240-0018508-012
Misc. Info.:
Operator: 1644 Instrument ID: A3UX17
Purge Vol: 5.000 mL ALS Bottle#: 11
Lims Batch ID: 80415 Lims Sample ID: 12
Detector: MS SCAN

Method: \\NCCHROM\ChromData\A3UX17\20130403-18508.b\8260_17.m
Last Update: 04-Apr-2013 08:08:06 Calib Date: 26-Feb-2013 12:10:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\NCCHROM\ChromData\A3UX17\20130226-17580.b\UXR3884.D
Limit Group: MSV 8260B ICAL
Integrator: RTE ID Type: Deconvolution ID
Column Type: DB-624 Column Dia: 0.18 mm
Process Host: XAWRK036

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.763	5.763	0.0	99	1793893	10.0	
* 2 Chlorobenzene-d5	117	8.479	8.467	0.012	85	1635232	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.720	10.720	0.0	94	825928	10.0	
$ 6 Dibromofluoromethane (Surr)	113	5.182	5.182	0.0	59	367525	9.32	
$ 7 1,2-Dichloroethane-d4 (Surr)	65	5.479	5.479	0.0	0	461260	8.87	
$ 8 Toluene-d8 (Surr)	98	7.151	7.139	0.012	92	1522163	8.00	
$ 9 4-Bromofluorobenzene (Surr)	95	9.582	9.582	0.0	92	505182	7.30	
14 Dichlorodifluoromethane	85		1.660					
15 Chloromethane	50		1.826					
17 Vinyl chloride	62		1.945					
18 Bromomethane	94		2.312					
19 Chloroethane	64		2.419					
21 Trichlorofluoromethane	101		2.668					
25 1,1-Dichloroethene	96	3.178	3.178	0.0	94	75538	1.57	
26 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.190					
27 Acetone	43	3.237	3.237	0.0	69	16382	0.8742	
29 Carbon disulfide	76		3.391					
33 Methylene Chloride	84	3.641	3.640	0.001	94	33064	0.1171	
34 2-Methyl-2-propanol	59		3.735					
35 Methyl tert-butyl ether	73		3.878					
37 trans-1,2-Dichloroethene	96		3.878					
39 1,1-Dichloroethane	63		4.269					9
40 Vinyl acetate	86		4.305					
41 Isopropyl ether	87		4.305					
43 Tert-butyl ethyl ether	59		4.625					9
44 2,2-Dichloropropane	77		4.767					9
46 2-Butanone (MEK)	43		4.779					9
45 cis-1,2-Dichloroethene	96	4.779	4.779	0.0	72	61531	1.11	
50 Chlorobromomethane	128		4.981					
52 Chloroform	83	5.040	5.040	0.0	55	17195	0.2006	
53 1,1,1-Trichloroethane	97		5.206					
56 1,1-Dichloropropene	75		5.348					

Report Date: 04-Apr-2013 08:08:20 Chrom Revision: 2.0 01-Apr-2013 21:16:10
Data File: \\NCCHROM\ChromData\A3UX17\20130403-18508.b\UXR4832.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
55 Carbon tetrachloride	117	5.348	5.348	0.0	47	6487	0.1280	
58 Benzene	78	5.526	5.526	0.0	58	32355	0.1466	
59 1,2-Dichloroethane	62		5.550					
60 Tert-amyl methyl ether	73		5.609					9
63 Trichloroethene	130	6.083	6.083	0.0	93	1819924	36.0	
66 1,2-Dichloropropane	63		6.285					
69 Dibromomethane	93		6.392					
70 Dichlorobromomethane	83		6.510					
72 2-Chloroethyl vinyl ether	63		6.759					
73 cis-1,3-Dichloropropene	75		6.902					
74 4-Methyl-2-pentanone (MIBK)	43		7.032					
75 Toluene	91		7.210					9
76 trans-1,3-Dichloropropene	75		7.400					
79 Tetrachloroethene	164		7.696					9
81 1,3-Dichloropropane	76		7.720					
82 2-Hexanone	43		7.779					
84 Chlorodibromomethane	129		7.933					
85 Ethylene Dibromide	107		8.052					
87 Chlorobenzene	112		8.502					
88 1,1,1,2-Tetrachloroethane	131		8.574					
89 Ethylbenzene	106		8.585					
90 m-Xylene & p-Xylene	106		8.692					
91 o-Xylene	106		9.084					
92 Styrene	104		9.095					
93 Bromoform	173		9.285					
95 Isopropylbenzene	105		9.427					
97 1,1,2,2-Tetrachloroethane	83		9.724					
98 Bromobenzene	156		9.748					
100 1,2,3-Trichloropropane	110		9.771					
101 N-Propylbenzene	120		9.819					
102 2-Chlorotoluene	126		9.926					
104 4-Chlorotoluene	126		10.032					
105 tert-Butylbenzene	119		10.317					
106 1,2,4-Trimethylbenzene	105		10.364					9
107 sec-Butylbenzene	105		10.530					
108 1,3-Dichlorobenzene	146		10.661					
109 4-Isopropyltoluene	119		10.673					
110 1,4-Dichlorobenzene	146		10.744					
111 1,2,3-Trimethylbenzene	105		10.791					
112 n-Butylbenzene	91		11.076					
113 1,2-Dichlorobenzene	146		11.123					
114 1,2-Dibromo-3-Chloropropane	157		11.906					
116 1,2,4-Trichlorobenzene	180		12.724					
117 Hexachlorobutadiene	225		12.890					
118 Naphthalene	128		12.997					
119 1,2,3-Trichlorobenzene	180		13.258					
S 124 Xylenes, Total	106		16.530					7

SVOC CALCULATION LIQUIDS	SAMPLE MRC-MW-53B-032613		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	160398		
INTERNAL STANDARD	1,4-DICHLOROBENZENE-D4		
I.S. RESPONSE	242422		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.5004		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1050	ml	
DILUTION FACTOR (DF)	1		
INJECTION VOLUME - VOL inj.	0.001	ml	

$$\frac{\text{(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final}}{\text{(I.S. RESPONSE) X (CAL. RRF) X (vol. initial)}} = 10.0742 \text{ ng/ml or ug/l}$$

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22475-1

SDG No.:

Lab Sample ID: CCVIS 240-80415/2 Calibration Date: 04/03/2013 12:40

Instrument ID: A3UX17 Calib Start Date: 02/26/2013 08:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/26/2013 09:56

Lab File ID: UXR4822.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1833	0.3254		1.00	0.0100	77.5*	50.0
Chloromethane	Ave	0.3234	0.3767	0.1000	1.00	0.0100	16.5	50.0
Vinyl chloride	Ave	0.3618	0.3520		1.00	0.0100	-2.7	20.0
Bromomethane	Lin1		0.1773		1.00	0.0100	-16.5	50.0
Chloroethane	Ave	0.2763	0.2148		1.00	0.0100	-22.3	50.0
Trichlorofluoromethane	Ave	0.4114	0.3831		1.00	0.0100	-6.9	50.0
Acrolein	Ave	0.0387	0.0493		20.0	0.100	27.6	50.0
1,1-Dichloroethene	Ave	0.2677	0.3085		1.00	0.0100	15.2	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1940	0.2325		1.00	0.0100	19.8	50.0
Acetone	Lin1		0.0748		10.0	0.0200	15.3	50.0
Iodomethane	Ave	0.3965	0.4758		1.00	0.0100	20.0	50.0
Carbon disulfide	Ave	0.8070	0.9552		1.00	0.0100	18.4	50.0
Acetonitrile	Ave	0.0317	0.0358		20.0	0.100	12.8	50.0
Methyl acetate	Ave	0.1663	0.1840		10.0	0.0200	10.6	50.0
Methylene Chloride	Lin1		0.3783		1.00	0.0100	20.2	50.0
tert-Butyl alcohol	Ave	0.0103	0.0132		50.0	0.200	28.0	50.0
Acrylonitrile	Ave	0.0947	0.1100		20.0	0.0200	16.1	50.0
Methyl tert-butyl ether	Ave	0.5842	0.7430		1.00	0.0100	27.2	50.0
trans-1,2-Dichloroethene	Ave	0.2966	0.3505		1.00	0.0100	18.1	50.0
Hexane	Ave	0.0718	0.0824		1.00	0.0100	14.7	20.0
1,1-Dichloroethane	Ave	0.5137	0.5747	0.1000	1.00	0.0100	11.9	50.0
Vinyl acetate	Lin1		0.0474		2.00	0.0100	20.9	50.0
2,2-Dichloropropane	Ave	0.2004	0.2753		1.00	0.0100	37.4	50.0
2-Butanone	Ave	0.0846	0.0947		10.0	0.0200	12.0	50.0
cis-1,2-Dichloroethene	Ave	0.3095	0.3642		1.00	0.0100	17.7	50.0
Bromochloromethane	Ave	0.1344	0.1599		1.00	0.0100	19.0	50.0
Tetrahydrofuran	Ave	0.0532	0.0621		5.00	0.0100	16.7	50.0
Chloroform	Ave	0.4779	0.5286		1.00	0.0100	10.6	20.0
1,1,1-Trichloroethane	Ave	0.3259	0.4030		1.00	0.0100	23.6	50.0
Cyclohexane	Ave	0.4971	0.6054		1.00	0.0100	21.8	50.0
1,1-Dichloropropene	Ave	0.3793	0.4278		1.00	0.0100	12.8	50.0
Carbon tetrachloride	Ave	0.2826	0.3530		1.00	0.0100	24.9	50.0
Benzene	Ave	1.231	1.347		1.00	0.0100	9.5	50.0
1,2-Dichloroethane	Ave	0.3836	0.3682		1.00	0.0100	-4.0	50.0
Trichloroethene	Ave	0.2819	0.3195		1.00	0.0100	13.3	50.0
Methylcyclohexane	Ave	0.4823	0.5724		1.00	0.0100	18.7	50.0
1,2-Dichloropropane	Ave	0.2758	0.3092		1.00	0.0100	12.1	20.0
1,4-Dioxane	Ave	0.0021	0.0025		50.0	0.500	19.0	50.0
Dibromomethane	Ave	0.1491	0.1590		1.00	0.0100	6.7	50.0
Bromodichloromethane	Ave	0.2821	0.3158		1.00	0.0100	11.9	50.0

FORM VII 8260B

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 | Lab Sample ID: 240-22475-7

Matrix: Water | Lab File ID: 0403014.D

Analysis Method: 8270D | Date Collected: 03/26/2013 12:21

Extract. Method: 3520C | Date Extracted: 03/29/2013 10:47

Sample wt/vol: 1050(mL) | Date Analyzed: 04/03/2013 14:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80345 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	10		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		20-110
367-12-4	2-Fluorophenol (Surr)	70		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	78		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	71		21-110
4165-62-2	Phenol-d5 (Surr)	71		21-110
1718-51-0	Terphenyl-d14 (Surr)	61		24-110

Report Date: 04-Apr-2013 09:06:23 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4AG2\20130403-18487.b\0403014.D		
Lims ID:	240-22475-G-7-A	Client ID:	MRC-MW-53B-032613
Inject. Date:	03-Apr-2013 14:58:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018487-014		
Misc. Info.:	240-22475-G-7-A		
Operator:		Instrument ID:	A4AG2
Injection Vol:	1.0 ul	ALS Bottle#:	14
Lims Batch ID:	80345	Lims Sample ID:	14
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20130403-18487.b\8270 ag2.m		
Last Update:	04-Apr-2013 09:06:12	Calib Date:	02-Apr-2013 21:45:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20130402-18465.b\0402027.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK012		

First Level Reviewer: hulat Date: 04-Apr-2013 06:08:36

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.946	5.946	0.0	95	242422	4.00	
* 2 Naphthalene-d8	136	7.059	7.059	0.0	99	940362	4.00	
* 3 Acenaphthene-d10	164	8.551	8.551	0.0	92	557867	4.00	
* 4 Phenanthrene-d10	188	9.819	9.819	0.0	98	935823	4.00	
* 5 Chrysene-d12	240	12.391	12.391	0.0	97	971264	4.00	
* 6 Perylene-d12	264	14.483	14.483	0.0	97	751017	4.00	
$ 7 2-Fluorophenol	112	4.700	4.700	0.0	90	768058	10.5	
$ 8 Phenol-d5	99	5.583	5.583	0.0	98	1010104	10.7	
$ 9 Nitrobenzene-d5	82	6.428	6.428	0.0	86	578889	7.13	
$ 10 2-Fluorobiphenyl (Surr)	172	7.963	7.968	-0.005	100	1109802	6.38	
$ 11 2,4,6-Tribromophenol	330	9.220	9.220	0.0	92	243447	11.7	
$ 12 Terphenyl-d14	244	11.188	11.188	0.0	98	1156897	6.10	
26 1,4-Dioxane	88	2.566	2.566	0.0	89	160398	5.29	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22475-1 Analy Batch No.: 80256

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 15:37 Calibration End Date: 04/02/2013 18:30 Calibration ID: 14347

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80256/18	0402018.D
Level 2	STD2 240-80256/17	0402017.D
Level 3	STD3 240-80256/16	0402016.D
Level 4	STD4 240-80256/15	0402015.D
Level 5	STD5 240-80256/14	0402014.D
Level 6	STD6 240-80256/13	0402013.D
Level 7	STD7 240-80256/12	0402012.D
Level 8	STD8 240-80256/11	0402011.D
Level 9	STD9 240-80256/10	0402010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4626	0.5947 0.4586	0.5418 0.4905	0.5104 0.4924	0.4518	Ave		0.5004				9.7		20.0			
N-Nitrosodimethylamine	0.6313	0.4990 0.6556	0.5985 0.7034	0.5905 0.6926	0.6182	Ave		0.6236				10.0		20.0			
Pyridine	1.1465	1.0018 1.1644	1.1053 1.2576	1.1543 1.2317	1.1242	Ave		1.1482				6.8		20.0			
Benzaldehyde	0.9722	+++++ 0.9750	0.9399 1.0327	0.9910 0.9821	0.9986	Ave		0.9861			0.0100	2.7		20.0			
Phenol	1.4822	1.4876 1.5181	1.5297 1.6234	1.4911 1.5742	1.5147	Ave		1.5276			0.8000	3.2		20.0			
Aniline	1.9109	1.8808 1.9330	1.9101 2.0658	1.9156 2.0213	1.9062	Ave		1.9430				3.3		20.0			
Bis(2-chloroethyl)ether	1.2043	1.2155 1.2283	1.2180 1.3036	1.2254 1.2422	1.2263	Ave		1.2329			0.7000	2.5		20.0			
2-Chlorophenol	1.2321	1.1390 1.2499	1.2188 1.3507	1.2090 1.3177	1.2499	Ave		1.2459			0.8000	5.2		20.0			
1,3-Dichlorobenzene	1.3162	1.3059 1.3417	1.3655 1.4444	1.3436 1.4021	1.3328	Ave		1.3565				3.4		20.0			
1,4-Dichlorobenzene	1.3208	1.3775 1.3502	1.3771 1.4508	1.3656 1.4261	1.3560	Ave		1.3780				3.0		20.0			
Benzyl alcohol	0.7892	0.7191 0.8193	0.7447 0.8808	0.8073 0.8399	0.8005	Ave		0.8001				6.4		20.0			
1,2-Dichlorobenzene	1.2832	1.2935 1.2775	1.3126 1.3845	1.3293 1.3475	1.2793	Ave		1.3134				2.9		20.0			
2-Methylphenol	1.1241	1.0812 1.1532	1.1252 1.2421	1.1212 1.1898	1.1584	Ave		1.1494			0.7000	4.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

SVOC CALCULATION LIQUIDS	**SAMPLE MRC-MW-53B-032613**		
TARGET ANALYTE	PERCHLORATE		
ANALYTE RESPONSE	117738490		
INTERNAL STANDARD	18-O PERCHLORATE		
I.S. RESPONSE	159519735		
I.S. CONCENTRATION	10	NG/ML	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.7914		
VOLUME OF FINAL EXTRACT	4	ML	
VOLUME OF INITIAL EXTRACT	4	ML	
DILUTION FACTOR (DF)	1		

$$\frac{\text{(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final}}{\text{(I.S. RESPONSE) X (CAL. RRF) X (vol. initial)}} = 9.3263 \text{ ng/ml or ug/l}$$

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22475-1

SDG No.:

Client Sample ID: MRC-MW-53B-032613 | Lab Sample ID: 240-22475-7

Matrix: Water | Lab File ID: 02APR13-perc-074.d

Analysis Method: 6850 | Date Collected: 03/26/2013 12:21

Extraction Method: Filtration | Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/03/2013 11:13

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 80(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	9.3		0.50	0.082

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20130402-3639.b\02APR13-perc-074.d		
Lims ID:	240-22475-D-7-A	Client ID:	MRC-MW-53B-032613
Inject. Date:	03-Apr-2013 11:13:48	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:			
Misc. Info.:			
Operator:		Instrument ID:	A5
Injection Vol:	80.0 ul	ALS Bottle#:	0
Lims Batch ID:	13496	Lims Sample ID:	72
Detector:	MS QQQ		
Method:	\\Sacchrom\ChromData\A5\20130402-3639.b\6850_A5.m		
Last Update:	03-Apr-2013 16:09:53	Calib Date:	02-Apr-2013 18:10:12
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20130402-3639.b\02APR13-perc-012.d		
Limit Group:	LC 6850 ICAL		
Integrator:	Picker		
Column Type:		Column Dia:	
Process Host:	XAWRK022		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
2 Perchlorate									
99.0 > 83.0	9.962	9.975	-0.013	1.001	117738490	9.33		1346	
101.0 > 85.0	9.972	9.975	-0.003	1.002	39005311		3.02(2.30-3.80)	627	
* 1 18-O Perchlorate									
107.0 > 89.0	9.955	9.982	-0.027		159519735	10.0		2336	
109.0 > 91.0	9.965	9.982	-0.017		52116053		3.06(2.30-3.80)	2742	

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22475-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	RRF LVL 1 LVL 6	RRF LVL 2 LVL 7	RRF LVL 3 LVL 8	RRF LVL 4	RRF LVL 5	CURVE TYPE	COEFFICIENT B	COEFFICIENT M1	COEFFICIENT M2	#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
Perchlorate	0.8443 0.7603	0.8106 0.8079	0.7242 0.8387	0.7636	0.7815	Ave		0.7914				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 22, 2013**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / 1,4-DIOXANE / PCB / OVG / PERCHLORATE**
INORGANIC DATA VALIDATION – TOTAL & SELECT METALS / MISC INORGANIC ANALYSES
LOCKHEED MRC
SAMPLE DELIVERY GROUP (SDG) 240-22510-1

SAMPLES: 6 / Aqueous / VOC

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW27A-032713
MRC-MW27B-032713	MRC-MW27C-032713	TB-032713

2 / Aqueous / SVOC – 1,4-Dioxane / Perchlorate

MRC-MW-96A-032713	MRC-MW-96B-032713

3 / Aqueous / OVG / Total & Select Metals & Silicon Dioxide
3 / Aqueous / MISC – chloride, sulfate, nitrate-N, nitrite-N, ammonia-N, orthophosphate-P, alkalinity, TDS, dissolved organic carbon

MRC-MW24A-032713	MRC-MW27A-032713	MRC-MW27B-032713

2 / Aqueous / Total Metals

MRC-MW-96A-032713	MRC-MW-96B-032713

2 / Aqueous / PCB

MRC-MW103A-032713	MRC-MW103B-032713

Overview

The sample set for Lockheed MRC, SDG 240-22510-1, consisted of nine (9) aqueous samples including one (1) aqueous trip blank sample. Six (6) of the samples were analyzed for volatile organic compounds (VOC) as listed above. Two (2) aqueous samples were analyzed for the semi-volatile organic compound (SVOC) 1,4-dioxane and the analyte perchlorate, as listed above. Three (3) samples were analyzed for organic volatile gases (OVG), total & select metals & silicon dioxide, and the miscellaneous inorganic analytes of chloride, sulfate, nitrate as Nitrogen (N), nitrite as N, ammonia as N, orthophosphate, alkalinity, total dissolved solids (TDS), and dissolved organic carbon, as listed above. Two (2) samples were analyzed for total metals as listed above. Two (2) samples were analyzed for polychlorinated biphenyls (PCBs), as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on March 27, 2013 and analyzed by TestAmerica Laboratories, Inc., North Canton, Irvine, and Sacramento for the analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260B for VOCs, 8270D for SVOCs, 8082 for PCBs, 6010C for metals, 6020 for metals, 7470A for mercury, 9060 for dissolved organic carbon, and EPA Method 6850 for perchlorate, method RSK-175 for OVGs, Method 300.0 for anions, Method 310.1 for alkalinity, Method 350.3 for ammonia as nitrogen, and Method 160.1 for total dissolved solids, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank/preparation results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, ICP serial dilution results, ICP interference results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for tert-butyl alcohol on instrument A3UX16 on 02/07/13. The continuing calibration verification (CCV) RRF for tert-butyl alcohol was also less than the 0.05 criteria for instrument A3UX16 on 04/04/13 @ 11:39.

  Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW27A-032713
MRC-MW27B-032713	MRC-MW27C-032713	TB-032713

  Action: All affected samples had non-detected results for tert-butyl alcohol which were qualified rejected, (UR).

Minor Problems

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- The following laboratory VOC contaminants were detected in the method blank and trip blank sample at the following maximum concentrations affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Acetone [1]	1.3	13.0
Benzene [2]	0.138	0.690
Hexachlorobutadiene [2]	0.831	4.155
Methylene chloride [2]	1.18	11.8
1,2,3-Trichlorobenzene [2]	0.440	2.200
1,2,4-Trichlorobenzene [2]	0.288	1.440

  [1] Trip blank sample TB-032713 affecting samples MRC-MW-96A-032713, MRC-MW-96B-032713, MRC-MW27A-032713, MRC-MW27B-032713, MRC-MW27C-032713, and TB-032713.

  [2] Method blank MB 240-80572 affecting samples MRC-MW-96A-032713, MRC-MW-96B-032713, MRC-MW27A-032713, MRC-MW27B-032713, MRC-MW27C-032713, and TB-032713.

  An action level of ten times the maximum level for methylene chloride and acetone, and five times the maximum level for the other contaminants, has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the analyte action level were qualified (B) for blank contamination. The trip blank sample results were not qualified for blank contamination. Positive sample results for acetone and methylene chloride were qualified for blank contamination.

- The VOC continuing calibration verification (CCV) percent difference (%D) was greater than the 20% and less than the 50% quality control limit for 1,2,3-trimethylbenzene for instrument A3UX16 on 04/04/13 @ 12:01.

  Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW27A-032713
MRC-MW27B-032713	MRC-MW27C-032713	TB-032713

  Action: The sample MRC-MW-96B-032713 positive 1,2,3-trimethylbenzene result was qualified estimated, (J). The remaining samples had non-detected 1,2,3-trimethylbenzene results which were not qualified.

- The VOC CCV %D was greater than the 20% and greater than the 50% quality control limit for dichlorodifluoromethane and trichlorofluoromethane for instrument A3UX16 on 04/04/13 @ 11:39.

  Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW27A-032713
MRC-MW27B-032713	MRC-MW27C-032713	TB-032713

  Action: The non-detected dichlorodifluoromethane and trichlorofluoromethane sample results were qualified estimated, (UJ).

- Samples had positive VOC tentatively identified compound (TICs) results and other VOCs (VOCs which had not been requested to be analyzed for in the samples but were calibrated for by the laboratory) as listed below.

Sample	TIC Analyte(s) and other non-requested VOCs
MRC-MW-96B-032713	1-ethyl-2-methyl benzene, butane, 2,2-dimethyl butane, 2-methyl butane, pentane, 3-methyl pentane
MRC-MW27A-032713	1-pentene, 2-methyl butane, cyclohexane
MRC-MW27C-032713	dimethyl ether

  Actions: The sample positive VOC TIC results were qualified as estimated, (NJ), presumptively present, as TIC analytes. The VOC analytes which the laboratory had included in the instrument calibration but which were not included in the list of VOCs to be analyzed, were also qualified as estimated, (NJ), presumptively present.

- The contract required detection limit (CRDL) %Rs were less than the 90% (and >50%) quality control limit for copper, nickel, selenium, and silver for CRI 440-96433/9.

  Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW24A-032713
MRC-MW27A-032713	MRC-MW27B-032713	

  Actions: The non-detected selenium and silver analyte sample results were qualified biased non-detected low, (UL), with the exception of a sample result qualified non-detected for blank contamination. The positive copper analyte result for sample MRC-MW27A-032713 was <2X the CRQL and was therefore qualified biased detected low, (L). The remaining sample copper results were >2X the CRQL and were not qualified. The positive selenium sample results were qualified (J) due to a conflicting qualifier(s) and were therefore not qualified for the CRDL non-compliance.

- The interference AB check standard %R was greater than the 120% quality control limit for zinc for ICSAB 440-96433/15.

  Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW24A-032713
MRC-MW27A-032713	MRC-MW27B-032713	

  Actions: The positive zinc analyte sample results were qualified biased high, (K).

- The following metal contaminants were detected in the blank samples at the following maximum concentration:

Analyte	Maximum Conc. µg/L	Action Level µg/L
Calcium [1]	139	695
Magnesium [1]	39.8	199.0
Manganese [1]	2.06	10.30
Molybdenum [2]	0.255	1.275
Silver [2]	0.244	1.220
Molybdenum [3]	1.00	5.00

[1] Maximum concentration found in preparation blank MB 240-79873/1-A affecting samples MRC-MW24A-032713, MRC-MW27A-032713, and MRC-MW27B-032713.
[2] Maximum concentration found in CCB 440-96433/47 affecting samples MRC-MW-96A-032713, MRC-MW-96B-032713, and MRC-MW24A-032713.
[3] Maximum concentration found in a preparation blank sample MB 440-96231/1-A affecting samples MRC-MW-96A-032713, MRC-MW-96B-032713, MRC-MW24A-032713, MRC-MW27A-032713, and MRC-MW27B-032713.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Affected sample positive molybdenum and silver results were qualified for blank contamination.

- The following laboratory anion contaminant was detected in the continuing calibration blank (CCB) and the method blank at the following maximum concentration affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Chloride [1]	0.113	0.565
Ammonia as N [2]	0.0752	0.3760
Ammonia as N [3]	0.0544	0.2720

[1] CCB 240-81184/14 affecting samples MRC-MW24A-032713, MRC-MW27A-032713, and MRC-MW27B-032713.
[2] Method blank MB 240-80480/7 affecting samples MRC-MW24A-032713, MRC-MW27A-032713, and MRC-MW27B-032713.
[3] CCB 240-80480/30 affecting samples MRC-MW24A-032713, MRC-MW27A-032713, and MRC-MW27B-032713. Maximum ammonia contamination detection of applicable CCBs and initial calibration blank (ICB).

An action level of five times the maximum level for the contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Sample MRC-MW24A-032713 and MRC-MW27B-032713 ammonia results were qualified for method blank contamination.

Notes

Samples were analyzed diluted for VOCs as listed below resulting in elevated concentrations for non-detected VOC analytes.

Sample	Dilution
MRC-MW-96A-032713	833.3X
MRC-MW-96B-032713	25X
MRC-MW27A-032713	5X
MRC-MW27B-032713	33.3X

The VOC CCV %Ds were greater than the 20% and less than the 50% quality control limit for dichlorodifluoromethane, chloromethane, bromomethane, chloroethane, 1,1,2-trichlorotrifluoroethane, 1,2,4-trichlorobenzene, hexachlorobutadiene, 1,2,3-trichlorobenzene, and tert-amyl-methyl ether for instrument A3UX16 on 04/04/13 @ 11:39 and @ 12:01.

Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW27A-032713
MRC-MW27B-032713	MRC-MW27C-032713	TB-032713

Action: The sample aforementioned analyte results were all non-detected and were not qualified.

The VOC laboratory control sample (LCS) percent recovery (%R) was greater than the quality control limit for trichlorofluoromethane for LCS 240-80572.

Affected Samples:

MRC-MW-96A-032713	MRC-MW-96B-032713	MRC-MW27A-032713
MRC-MW27B-032713	MRC-MW27C-032713	TB-032713

Action: The trichlorofluoromethane sample results were all non-detected and were not qualified.

The VOC matrix spike (MS) and MS duplicate (MSD) %Rs were non-compliant for VOC analytes for a spiked sample from another SDG (240-22494-F-45). No validation action was necessary as the spiked sample was not from this SDG.

Sample MRC-MW27A-032713 was analyzed diluted 10X for methane.

The following laboratory OVG contaminant was detected in the method blanks at the following maximum concentrations affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Methane [1]	0.232	1.160
Methane [2]	0.167	0.835

[1] Method blank MB 240-79864 affecting sample MRC-MW24A-032713.
[2] Method blank MB 240-79766 affecting sample MRC-MW27A-032713 and MRC-MW27B-032713.

An action level of five times the maximum level for methane has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. No sample methane results were qualified for blank contamination.

Sample MRC-MW24A-032713 and MRC-MW27A-032713 were analyzed diluted 5X for chloride.

The general chemistry chloride matrix spike (MS) %R was greater than the quality control limit for a spiked sample from another SDG (240-22482-B-1). No validation action was necessary as the spiked sample was not from this SDG.

The general chemistry orthophosphate as P matrix spike (MS) %R was greater than the quality control limit for a spiked sample from another SDG (240-22507-K-4). No validation action was necessary as the spiked sample was not from this SDG.

Samples were analyzed diluted for metals as listed below.

Sample	Analyte	Dilution
MRC-MW24A-032713	Manganese	2X
MRC-MW27A-032713	Manganese	5X

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol sample results were rejected due to calibration and CCV RRF criteria non-compliances. Sample VOC, ammonia, and metal results were qualified blank contamination. Sample VOC results were qualified for CCV %D non-compliances. Sample metal analyte results were qualified for CRDL %R and interference AB check standard %R non-compliances.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). Sample positive VOC TIC results were qualified as presumptively present.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260B, 8270D, 8082, 6010C, 6020, 7470A, 9060, EPA Method 6850, RSK-175, Method 300.0, Method 310.1, Method 350.3, and Method 160.1, the Region III EPA Functional Guidelines for Organic Data Validation (9/94), and the Region III EPA Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (April 1993).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW27A-032713			MRC-MW27B-032713			MRC-MW27C-032713			MRC-MW-96A-032713		
SDG: 240-22510-1	LAB_ID	240-22510-2			240-22510-3			240-22510-4			240-22510-8		
FRACTION: OV	SAMP_DATE	3/27/2013			3/27/2013			3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		1.2	U		7.7	U		0.23	U		190	U	
1,1,1-TRICHLOROETHANE		1.1	U		7.3	U		0.22	U		180	U	
1,1,2,2-TETRACHLOROETHANE		0.9	U		6	U		0.18	U		150	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		1.4	U		9.3	U		0.28	U		230	U	
1,1-DICHLOROETHANE		2.1	J	P	5	U		0.15	U		120	U	
1,1-DICHLOROETHENE		2.2	J	P	9.8	J	P	0.19	U		160	U	
1,1-DICHLOROPROPENE		0.65	U		4.3	U		0.13	U		110	U	
1,2,3-TRICHLOROBENZENE		0.85	U		5.7	U		0.17	U		140	U	
1,2,3-TRICHLOROPROPANE		2.2	U		14	U		0.43	U		360	U	
1,2,3-TRIMETHYLBENZENE		0.03	U		0.2	U		0.0059	U		4.9	U	
1,2,4-TRICHLOROBENZENE		0.75	U		5	U		0.15	U		120	U	
1,2,4-TRIMETHYLBENZENE		0.6	U		4	U		0.12	U		100	U	
1,2-DIBROMO-3-CHLOROPROPANE		3.4	U		22	U		0.67	U		560	U	
1,2-DIBROMOETHANE		1.2	U		8	U		0.24	U		200	U	
1,2-DICHLOROBENZENE		0.65	U		4.3	U		0.13	U		110	U	
1,2-DICHLOROETHANE		1.1	U		7.3	U		0.22	U		180	U	
1,2-DICHLOROPROPANE		0.9	U		6	U		0.18	U		150	U	
1,3,5-TRIMETHYLBENZENE													
1,3-DICHLOROBENZENE		0.7	U		4.7	U		0.14	U		120	U	
1,3-DICHLOROPROPANE		0.8	U		5.3	U		0.16	U		130	U	
1,4-DICHLOROBENZENE		0.65	U		4.3	U		0.13	U		110	U	
1-PENTENE		6.6	NJ	Z1									
2,2-DICHLOROPROPANE		0.65	U		4.3	U		0.13	U		110	U	
2-BUTANONE		2.9	U		19	U		0.57	U		470	U	
2-CHLOROETHYL VINYL ETHER		5	U		33	U		0.99	U		820	U	
2-CHLOROTOLUENE		0.55	U		3.7	U		0.11	U		92	U	
2-HEXANONE		2.1	U		14	U		0.41	U		340	U	
4-CHLOROTOLUENE		0.9	U		6	U		0.18	U		150	U	
4-ISOPROPYLTOLUENE		0.6	U		4	U		0.12	U		100	U	
4-METHYL-2-PENTANONE		1.6	U		11	U		0.32	U		270	U	
ACETONE		5.5	U		39	B	B	1.1	U		970	B	B
BENZENE		1.7	B	A	4.3	U		0.13	U		110	U	
BENZENE, 1-ETHYL-2-METHYL-													
BROMOBENZENE		0.65	U		4.3	U		0.13	U		110	U	
BROMOCHLOROMETHANE		1.5	U		9.7	U		0.29	U		240	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96B-032713			TB-032713		
SDG: 240-22510-1	LAB_ID	240-22510-9			240-22510-1		
FRACTION: OV	SAMP_DATE	3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		5.8	U		0.23	U	
1,1,1-TRICHLOROETHANE		5.5	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		4.5	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		7	U		0.28	U	
1,1-DICHLOROETHANE		3.8	U		0.15	U	
1,1-DICHLOROETHENE		4.8	U		0.19	U	
1,1-DICHLOROPROPENE		3.3	U		0.13	U	
1,2,3-TRICHLOROBENZENE		4.3	U		0.17	U	
1,2,3-TRICHLOROPROPANE		11	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		26	J	CP	0.0059	U	
1,2,4-TRICHLOROBENZENE		3.8	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		19	J	P	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		17	U		0.67	U	
1,2-DIBROMOETHANE		6	U		0.24	U	
1,2-DICHLOROBENZENE		3.3	U		0.13	U	
1,2-DICHLOROETHANE		5.5	U		0.22	U	
1,2-DICHLOROPROPANE		4.5	U		0.18	U	
1,3,5-TRIMETHYLBENZENE		8.4	NJ	Z1			
1,3-DICHLOROBENZENE		3.5	U		0.14	U	
1,3-DICHLOROPROPANE		4	U		0.16	U	
1,4-DICHLOROBENZENE		3.3	U		0.13	U	
1-PENTENE							
2,2-DICHLOROPROPANE		3.3	U		0.13	U	
2-BUTANONE		14	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		25	U		0.99	U	
2-CHLOROTOLUENE		2.8	U		0.11	U	
2-HEXANONE		10	U		0.41	U	
4-CHLOROTOLUENE		4.5	U		0.18	U	
4-ISOPROPYLTOLUENE		3	U		0.12	U	
4-METHYL-2-PENTANONE		8	U		0.32	U	
ACETONE		28	U		1.3	J	P
BENZENE		560			0.13	U	
BENZENE, 1-ETHYL-2-METHYL-		28	NJ	Z1			
BROMOBENZENE		3.3	U		0.13	U	
BROMOCHLOROMETHANE		7.3	U		0.29	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW27A-032713			MRC-MW27B-032713			MRC-MW27C-032713			MRC-MW-96A-032713		
SDG: 240-22510-1	LAB_ID	240-22510-2			240-22510-3			240-22510-4			240-22510-8		
FRACTION: OV	SAMP_DATE	3/27/2013			3/27/2013			3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMODICHLOROMETHANE		0.75	U		5	U		0.15	U		120	U	
BROMOFORM		3.2	U		21	U		0.64	U		530	U	
BROMOMETHANE		2.1	U		14	U		0.41	U		340	U	
BUTANE													
BUTANE, 2,2-DIMETHYL-													
BUTANE, 2-METHYL-		17	NJ	Z1									
CARBON DISULFIDE		0.65	U		4.3	U		0.13	U		110	U	
CARBON TETRACHLORIDE		0.65	U		4.3	U		0.13	U		110	U	
CHLOROBENZENE		0.75	U		5	U		0.15	U		120	U	
CHLORODIBROMOMETHANE		0.9	U		6	U		0.18	U		150	U	
CHLOROETHANE		1.5	U		9.7	U		0.29	U		240	U	
CHLOROFORM		0.8	U		5.3	U		0.16	U		130	U	
CHLOROMETHANE		1.5	U		10	U		0.3	U		250	U	
CIS-1,2-DICHLOROETHENE		43			310			0.17	U		26000		
CIS-1,3-DICHLOROPROPENE		0.7	U		4.7	U		0.14	U		120	U	
CYCLOHEXANE		0.75	NJ	Z1									
DIBROMOMETHANE		1.4	U		9.3	U		0.28	U		230	U	
DICHLORODIFLUOROMETHANE		1.6	UJ	C	10	UJ	C	0.31	UJ	C	260	UJ	C
DIISOPROPYL ETHER		7.5	U		50	U		1.5	U		1200	U	
DIMETHYL ETHER								10	NJ	Z1			
ETHYL TERT-BUTYL ETHER		0.55	U		3.7	U		0.11	U		92	U	
ETHYLBENZENE		0.85	U		5.7	U		0.17	U		140	U	
HEXACHLOROBUTADIENE		1.5	U		10	U		0.3	U		250	U	
HEXANE													
ISOPROPYLBENZENE		0.65	U		4.3	U		0.13	U		110	U	
M+P-XYLENES		1.2	U		8	U		0.24	U		200	U	
METHYL TERT-BUTYL ETHER		22			5.7	U		0.17	U		140	U	
METHYLENE CHLORIDE		3.5	B	A	25	B	A	0.33	U		660	B	A
NAPHTHALENE		1.2	U		8	U		0.24	U		200	U	
N-BUTYLBENZENE		0.6	U		4	U		0.12	U		100	U	
N-PROPYLBENZENE		0.7	U		4.7	U		0.14	U		120	U	
O-XYLENE		0.7	U		4.7	U		0.14	U		120	U	
PENTANE													
PENTANE, 3-METHYL-													
SEC-BUTYLBENZENE		0.65	U		4.3	U		0.13	U		110	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96B-032713			TB-032713		
SDG: 240-22510-1	LAB_ID	240-22510-9			240-22510-1		
FRACTION: OV	SAMP_DATE	3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMODICHLOROMETHANE		3.8	U		0.15	U	
BROMOFORM		16	U		0.64	U	
BROMOMETHANE		10	U		0.41	U	
BUTANE		31	NJ	Z1			
BUTANE, 2,2-DIMETHYL-		48	NJ	Z1			
BUTANE, 2-METHYL-		330	NJ	Z1			
CARBON DISULFIDE		3.3	U		0.13	U	
CARBON TETRACHLORIDE		3.3	U		0.13	U	
CHLOROBENZENE		3.8	U		0.15	U	
CHLORODIBROMOMETHANE		4.5	U		0.18	U	
CHLOROETHANE		7.3	U		0.29	U	
CHLOROFORM		4	U		0.16	U	
CHLOROMETHANE		7.5	U		0.3	U	
CIS-1,2-DICHLOROETHENE		9.6	J	P	0.17	U	
CIS-1,3-DICHLOROPROPENE		3.5	U		0.14	U	
CYCLOHEXANE		8.3	NJ	Z1			
DIBROMOMETHANE		7	U		0.28	U	
DICHLORODIFLUOROMETHANE		7.8	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		38	U		1.5	U	
DIMETHYL ETHER							
ETHYL TERT-BUTYL ETHER		2.8	U		0.11	U	
ETHYLBENZENE		5.6	J	P	0.17	U	
HEXACHLOROBUTADIENE		7.5	U		0.3	U	
HEXANE		14	NJ	Z1			
ISOPROPYLBENZENE		5.5	J	P	0.13	U	
M+P-XYLENES		32	J	P	0.24	U	
METHYL TERT-BUTYL ETHER		4.3	U		0.17	U	
METHYLENE CHLORIDE		19	B	A	0.33	U	
NAPHTHALENE		13	J	P	0.24	U	
N-BUTYLBENZENE		3	U		0.12	U	
N-PROPYLBENZENE		3.5	U		0.14	U	
O-XYLENE		61			0.14	U	
PENTANE		98	NJ	Z1			
PENTANE, 3-METHYL-		50	NJ	Z1			
SEC-BUTYLBENZENE		3.3	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW27A-032713			MRC-MW27B-032713			MRC-MW27C-032713			MRC-MW-96A-032713		
SDG: 240-22510-1	LAB_ID	240-22510-2			240-22510-3			240-22510-4			240-22510-8		
FRACTION: OV	SAMP_DATE	3/27/2013			3/27/2013			3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
STYRENE		0.55	U		3.7	U		0.11	U		92	U	
TERT-AMYL METHYL ETHER		0.34	U		2.2	U		0.067	U		56	U	
TERT-BUTYLBENZENE		0.65	U		4.3	U		0.13	U		110	U	
TERTIARY-BUTYL ALCOHOL		20	UR	C	130	UR	C	3.9	UR	C	3200	UR	C
TETRACHLOROETHENE		1.5	U		9.7	U		0.29	U		240	U	
TOLUENE		0.65	U		4.3	U		0.13	U		110	U	
TOTAL XYLENES		1.4	U		9.3	U		0.28	U		230	U	
TRANS-1,2-DICHLOROETHENE		0.95	U		6.3	U		0.19	U		160	U	
TRANS-1,3-DICHLOROPROPENE		0.95	U		6.3	U		0.19	U		160	U	
TRICHLOROETHENE		170			1000			0.17	U		3300		
TRICHLOROFLUOROMETHANE		1.1	UJ	C	7	UJ	C	0.21	UJ	C	170	UJ	C
VINYL ACETATE		0.95	U		6.3	U		0.19	U		160	U	
VINYL CHLORIDE		18			12	J	P	0.22	U		180	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96B-032713			TB-032713		
SDG: 240-22510-1	LAB_ID	240-22510-9			240-22510-1		
FRACTION: OV	SAMP_DATE	3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
STYRENE		2.8	U		0.11	U	
TERT-AMYL METHYL ETHER		1.7	U		0.067	U	
TERT-BUTYLBENZENE		3.3	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		98	UR	C	3.9	UR	C
TETRACHLOROETHENE		7.3	U		0.29	U	
TOLUENE		3.3	U		0.13	U	
TOTAL XYLENES		93			0.28	U	
TRANS-1,2-DICHLOROETHENE		4.8	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		4.8	U		0.19	U	
TRICHLOROETHENE		17	J	P	0.17	U	
TRICHLOROFLUOROMETHANE		5.3	UJ	C	0.21	UJ	C
VINYL ACETATE		4.8	U		0.19	U	
VINYL CHLORIDE		5.5	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96A-032713			MRC-MW-96B-032713		
SDG: 240-22510-1	LAB_ID	240-22510-8			240-22510-9		
FRACTION: OS	SAMP_DATE	3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		3.5			0.48	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW24A-032713			MRC-MW27A-032713			MRC-MW27B-032713		
SDG: 240-22510-1	LAB_ID	240-22510-5			240-22510-2			240-22510-3		
FRACTION: OVG	SAMP_DATE	3/27/2013			3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.23	J	P	3.2			0.1	U	
ETHENE		0.37	U		1.8			0.37	U	
METHANE		96			1700			11		

PROJ_NO: 04795	NSAMPLE	MRC-MW103A-032713			MRC-MW103B-032713		
SDG: 240-22510-1	LAB_ID	240-22510-6			240-22510-7		
FRACTION: PCB	SAMP_DATE	3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
AROCLOR-1016		0.17	U		0.17	U	
AROCLOR-1221		0.13	U		0.13	U	
AROCLOR-1232		0.16	U		0.16	U	
AROCLOR-1242		0.22	U		0.22	U	
AROCLOR-1248		0.1	U		0.1	U	
AROCLOR-1254		0.16	U		0.16	U	
AROCLOR-1260		0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW24A-032713			MRC-MW27A-032713			MRC-MW27B-032713			MRC-MW-96A-032713		
SDG: 240-22510-1	LAB_ID	240-22510-5			240-22510-2			240-22510-3			240-22510-8		
FRACTION: M	SAMP_DATE	3/27/2013			3/27/2013			3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U		0.3	U	
ARSENIC		0.9	U		3.7	J	P	0.9	U		0.9	U	
BARIUM		220			540			79			220		
BERYLLIUM		22			3.3			0.89	J	P	9.9		
CADMIUM		1.2			0.1	U		0.16	J	P	0.34	J	P
CALCIUM		17000			13000			18000					
CHROMIUM		0.9	U		2.4			0.9	U		0.94	J	P
COBALT		120			560			150			390		
COPPER		39			2.4	L	C	5			4.4		
IRON		420			94000			270					
LEAD		0.56	J	P	0.79	J	P	0.46	J	P	0.57	J	P
MAGNESIUM		22000			24000			3200	J	P			
MANGANESE		16000			32000			110					
MERCURY		0.17	J	P	0.12	U		0.12	U		0.1	U	
MOLYBDENUM		0.7	B	A	0.32	B	A	0.41	B	A	0.2	U	
NICKEL		350			240			170			310		
POTASSIUM		5400			2900	J	P	7100					
SELENIUM		1.3	J	P	0.5	UL	C	0.5	UL	C	1.3	J	P
SILICON DIOXIDE		11000			16000			7200					
SILVER		0.18	B	A	0.1	UL	C	0.1	UL	C	0.1	UL	C
SODIUM		210000			260000			89000					
THALLIUM		0.2	U		0.2	U		0.36	J	P	0.2	U	
VANADIUM		2.2	J	P	2.8	J	P	0.8	U		0.8	U	
ZINC		330	K	K	250	K	K	220	K	K	380	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW-96B-032713
SDG: 240-22510-1	LAB_ID	240-22510-9
FRACTION: M	SAMP_DATE	3/27/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
ANTIMONY	0.3	U	
ARSENIC	0.9	U	
BARIUM	600		
BERYLLIUM	8.3		
CADMIUM	1.8		
CALCIUM			
CHROMIUM	0.9	U	
COBALT	790		
COPPER	45		
IRON			
LEAD	2		
MAGNESIUM			
MANGANESE			
MERCURY	0.1	U	
MOLYBDENUM	0.2	U	
NICKEL	1400		
POTASSIUM			
SELENIUM	0.83	J	P
SILICON DIOXIDE			
SILVER	0.1	UL	C
SODIUM			
THALLIUM	0.2	U	
VANADIUM	0.8	U	
ZINC	1400	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW24A-032713			MRC-MW27A-032713			MRC-MW27B-032713			MRC-MW-96A-032713		
SDG: 240-22510-1	LAB_ID	240-22510-5			240-22510-2			240-22510-3			240-22510-8		
FRACTION: MISC	SAMP_DATE	3/27/2013			3/27/2013			3/27/2013			3/27/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		38			38			45					
AMMONIA-N		0.3	B	A	1.9			0.2	B	A			
CHLORIDE		510			690			170					
DISSOLVED ORGANIC CARBON		3.5			2.6			2.1					
NITRATE-N		0.11			0.023	U		0.14					
NITRITE-N		0.012	U		0.012	U		0.012	U				
ORTHOPHOSPHATE-P		0.044	U		0.044	U		0.044	U				
PERCHLORATE											0.082	U	
SULFATE		2.9			3.1			7.7					
TOTAL DISSOLVED SOLIDS		950			1000			310					

PROJ_NO: 04795	NSAMPLE	MRC-MW-96B-032713		
SDG: 240-22510-1	LAB_ID	240-22510-9		
FRACTION: MISC	SAMP_DATE	3/27/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALKALINITY				
AMMONIA-N				
CHLORIDE				
DISSOLVED ORGANIC CARBON				
NITRATE-N				
NITRITE-N				
ORTHOPHOSPHATE-P				
PERCHLORATE		3.6		
SULFATE				
TOTAL DISSOLVED SOLIDS				

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 | Lab Sample ID: 240-22510-8

Matrix: Water | Lab File ID: UXM7234.D

Analysis Method: 8260B | Date Collected: 03/27/2013 09:43

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 15:38

Soil Aliquot Vol: | Dilution Factor: 833.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	970	J	4200	920
71-43-2	Benzene	830	U	830	110
108-86-1	Bromobenzene	830	U	830	110
74-97-5	Bromochloromethane	830	U	830	240
75-27-4	Bromodichloromethane	830	U	830	120
75-25-2	Bromoform	830	U	830	530
74-83-9	Bromomethane	830	U	830	340
78-93-3	2-Butanone	4200	U	4200	470
75-15-0	Carbon disulfide	830	U	830	110
56-23-5	Carbon tetrachloride	830	U	830	110
108-90-7	Chlorobenzene	830	U	830	120
75-00-3	Chloroethane	830	U	830	240
110-75-8	2-Chloroethyl vinyl ether	8300	U	8300	820
67-66-3	Chloroform	830	U	830	130
74-87-3	Chloromethane	830	U	830	250
95-49-8	2-Chlorotoluene	830	U	830	92
106-43-4	4-Chlorotoluene	830	U	830	150
156-59-2	cis-1,2-Dichloroethene	26000		830	140
10061-01-5	cis-1,3-Dichloropropene	830	U	830	120
124-48-1	Dibromochloromethane	830	U	830	150
96-12-8	1,2-Dibromo-3-Chloropropane	4200	U	4200	560
106-93-4	1,2-Dibromoethane	830	U	830	200
74-95-3	Dibromomethane	830	U	830	230
95-50-1	1,2-Dichlorobenzene	830	U	830	110
541-73-1	1,3-Dichlorobenzene	830	U	830	120
106-46-7	1,4-Dichlorobenzene	830	U	830	110
75-71-8	Dichlorodifluoromethane	830	U	830	260
75-34-3	1,1-Dichloroethane	830	U	830	120
107-06-2	1,2-Dichloroethane	830	U	830	180
75-35-4	1,1-Dichloroethene	830	U	830	160
78-87-5	1,2-Dichloropropane	830	U	830	150
142-28-9	1,3-Dichloropropane	830	U	830	130
594-20-7	2,2-Dichloropropane	830	U	830	110
563-58-6	1,1-Dichloropropene	830	U	830	110
108-20-3	Diisopropyl ether	4200	U	4200	1200
100-41-4	Ethylbenzene	830	U	830	140

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 | Lab Sample ID: 240-22510-8

Matrix: Water | Lab File ID: UXM7234.D

Analysis Method: 8260B | Date Collected: 03/27/2013 09:43

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 15:38

Soil Aliquot Vol: | Dilution Factor: 833.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	4200	U	4200	92
87-68-3	Hexachlorobutadiene	830	U	830	250
591-78-6	2-Hexanone	4200	U	4200	340
98-82-8	Isopropylbenzene	830	U	830	110
75-09-2	Methylene Chloride	660	J B	830	270
108-10-1	4-Methyl-2-pentanone	4200	U	4200	270
1634-04-4	Methyl tert-butyl ether	830	U	830	140
179601-23-1	m-Xylene & p-Xylene	1700	U	1700	200
91-20-3	Naphthalene	830	U	830	200
104-51-8	n-Butylbenzene	830	U	830	100
103-65-1	n-Propylbenzene	830	U	830	120
95-47-6	o-Xylene	830	U	830	120
99-87-6	p-Isopropyltoluene	830	U	830	100
135-98-8	sec-Butylbenzene	830	U	830	110
100-42-5	Styrene	830	U	830	92
994-05-8	Tert-amyl-methyl ether (TAME)	4200	U	4200	56
75-65-0	tert-Butyl alcohol	17000	U	17000	3200
98-06-6	tert-Butylbenzene	830	U	830	110
630-20-6	1,1,1,2-Tetrachloroethane	830	U	830	190
79-34-5	1,1,2,2-Tetrachloroethane	830	U	830	150
127-18-4	Tetrachloroethene	830	U	830	240
108-88-3	Toluene	830	U	830	110
156-60-5	trans-1,2-Dichloroethene	830	U	830	160
10061-02-6	trans-1,3-Dichloropropene	830	U	830	160
87-61-6	1,2,3-Trichlorobenzene	830	U	830	140
120-82-1	1,2,4-Trichlorobenzene	830	U	830	120
71-55-6	1,1,1-Trichloroethane	830	U	830	180
79-01-6	Trichloroethene	3300		830	140
75-69-4	Trichlorofluoromethane	830	U *	830	170
96-18-4	1,2,3-Trichloropropane	830	U	830	360
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	830	U	830	230
526-73-8	1,2,3-Trimethylbenzene	4200	U	4200	4.9
95-63-6	1,2,4-Trimethylbenzene	830	U	830	100
108-05-4	Vinyl acetate	1700	U	1700	160
75-01-4	Vinyl chloride	830	U	830	180

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 Lab Sample ID: 240-22510-8

Matrix: Water Lab File ID: UXM7234.D

Analysis Method: 8260B Date Collected: 03/27/2013 09:43

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 15:38

Soil Aliquot Vol: Dilution Factor: 833.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	1700	U	1700	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 Lab Sample ID: 240-22510-8

Matrix: Water Lab File ID: UXM7234.D

Analysis Method: 8260B Date Collected: 03/27/2013 09:43

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 15:38

Soil Aliquot Vol: Dilution Factor: 833.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 | Lab Sample ID: 240-22510-9

Matrix: Water | Lab File ID: UXM7235.D

Analysis Method: 8260B | Date Collected: 03/27/2013 10:54

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 16:01

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	130	U	130	28
71-43-2	Benzene	560	B	25	3.3
108-86-1	Bromobenzene	25	U	25	3.3
74-97-5	Bromochloromethane	25	U	25	7.3
75-27-4	Bromodichloromethane	25	U	25	3.8
75-25-2	Bromoform	25	U	25	16
74-83-9	Bromomethane	25	U	25	10
78-93-3	2-Butanone	130	U	130	14
75-15-0	Carbon disulfide	25	U	25	3.3
56-23-5	Carbon tetrachloride	25	U	25	3.3
108-90-7	Chlorobenzene	25	U	25	3.8
75-00-3	Chloroethane	25	U	25	7.3
110-75-8	2-Chloroethyl vinyl ether	250	U	250	25
67-66-3	Chloroform	25	U	25	4.0
74-87-3	Chloromethane	25	U	25	7.5
95-49-8	2-Chlorotoluene	25	U	25	2.8
106-43-4	4-Chlorotoluene	25	U	25	4.5
156-59-2	cis-1,2-Dichloroethene	9.6	J	25	4.3
10061-01-5	cis-1,3-Dichloropropene	25	U	25	3.5
124-48-1	Dibromochloromethane	25	U	25	4.5
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	130	17
106-93-4	1,2-Dibromoethane	25	U	25	6.0
74-95-3	Dibromomethane	25	U	25	7.0
95-50-1	1,2-Dichlorobenzene	25	U	25	3.3
541-73-1	1,3-Dichlorobenzene	25	U	25	3.5
106-46-7	1,4-Dichlorobenzene	25	U	25	3.3
75-71-8	Dichlorodifluoromethane	25	U	25	7.8
75-34-3	1,1-Dichloroethane	25	U	25	3.8
107-06-2	1,2-Dichloroethane	25	U	25	5.5
75-35-4	1,1-Dichloroethene	25	U	25	4.8
78-87-5	1,2-Dichloropropane	25	U	25	4.5
142-28-9	1,3-Dichloropropane	25	U	25	4.0
594-20-7	2,2-Dichloropropane	25	U	25	3.3
563-58-6	1,1-Dichloropropene	25	U	25	3.3
108-20-3	Diisopropyl ether	130	U	130	38
100-41-4	Ethylbenzene	5.6	J	25	4.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 | Lab Sample ID: 240-22510-9

Matrix: Water | Lab File ID: UXM7235.D

Analysis Method: 8260B | Date Collected: 03/27/2013 10:54

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 16:01

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	130	U	130	2.8
87-68-3	Hexachlorobutadiene	25	U	25	7.5
591-78-6	2-Hexanone	130	U	130	10
98-82-8	Isopropylbenzene	5.5	J	25	3.3
75-09-2	Methylene Chloride	19	J B	25	8.3
108-10-1	4-Methyl-2-pentanone	130	U	130	8.0
1634-04-4	Methyl tert-butyl ether	25	U	25	4.3
179601-23-1	m-Xylene & p-Xylene	32	J	50	6.0
91-20-3	Naphthalene	13	J	25	6.0
104-51-8	n-Butylbenzene	25	U	25	3.0
103-65-1	n-Propylbenzene	25	U	25	3.5
95-47-6	o-Xylene	61		25	3.5
99-87-6	p-Isopropyltoluene	25	U	25	3.0
135-98-8	sec-Butylbenzene	25	U	25	3.3
100-42-5	Styrene	25	U	25	2.8
994-05-8	Tert-amyl-methyl ether (TAME)	130	U	130	1.7
75-65-0	tert-Butyl alcohol	500	U	500	98
98-06-6	tert-Butylbenzene	25	U	25	3.3
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	5.8
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	4.5
127-18-4	Tetrachloroethene	25	U	25	7.3
108-88-3	Toluene	25	U	25	3.3
156-60-5	trans-1,2-Dichloroethene	25	U	25	4.8
10061-02-6	trans-1,3-Dichloropropene	25	U	25	4.8
87-61-6	1,2,3-Trichlorobenzene	25	U	25	4.3
120-82-1	1,2,4-Trichlorobenzene	25	U	25	3.8
71-55-6	1,1,1-Trichloroethane	25	U	25	5.5
79-01-6	Trichloroethene	17	J	25	4.3
75-69-4	Trichlorofluoromethane	25	U *	25	5.3
96-18-4	1,2,3-Trichloropropane	25	U	25	11
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	25	U	25	7.0
526-73-8	1,2,3-Trimethylbenzene	26	J	130	0.15
95-63-6	1,2,4-Trimethylbenzene	19	J	25	3.0
108-05-4	Vinyl acetate	50	U	50	4.8
75-01-4	Vinyl chloride	25	U	25	5.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 Lab Sample ID: 240-22510-9

Matrix: Water Lab File ID: UXM7235.D

Analysis Method: 8260B Date Collected: 03/27/2013 10:54

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 16:01

Soil Aliquot Vol: Dilution Factor: 25

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	93		50	7.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	80		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 Lab Sample ID: 240-22510-9

Matrix: Water Lab File ID: UXM7235.D

Analysis Method: 8260B Date Collected: 03/27/2013 10:54

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 16:01

Soil Aliquot Vol: Dilution Factor: 25

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 9 TIC Result Total: 615.7

CAS NO.	COMPOUND NAME	RT	RESULT	Q
106-97-8	Butane	1.94	31	T J N
78-78-4	Butane, 2-methyl-	2.48	330	T J N
109-66-0	Pentane	2.73	98	T J N
75-83-2	Butane, 2,2-dimethyl-	3.18	48	T J N
96-14-0	Pentane, 3-methyl-	3.85	50	T J N
110-54-3	Hexane	4.10	14	J
110-82-7	Cyclohexane	5.23	8.3	J
108-67-8	1,3,5-Trimethylbenzene	9.92	8.4	J
611-14-3	Benzene, 1-ethyl-2-methyl-	10.13	28	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 | Lab Sample ID: 240-22510-2

Matrix: Water | Lab File ID: UXM7231.D

Analysis Method: 8260B | Date Collected: 03/27/2013 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 14:31

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	25	U	25	5.5
71-43-2	Benzene	1.7	J B	5.0	0.65
108-86-1	Bromobenzene	5.0	U	5.0	0.65
74-97-5	Bromochloromethane	5.0	U	5.0	1.5
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75
75-25-2	Bromoform	5.0	U	5.0	3.2
74-83-9	Bromomethane	5.0	U	5.0	2.1
78-93-3	2-Butanone	25	U	25	2.9
75-15-0	Carbon disulfide	5.0	U	5.0	0.65
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.65
108-90-7	Chlorobenzene	5.0	U	5.0	0.75
75-00-3	Chloroethane	5.0	U	5.0	1.5
110-75-8	2-Chloroethyl vinyl ether	50	U	50	5.0
67-66-3	Chloroform	5.0	U	5.0	0.80
74-87-3	Chloromethane	5.0	U	5.0	1.5
95-49-8	2-Chlorotoluene	5.0	U	5.0	0.55
106-43-4	4-Chlorotoluene	5.0	U	5.0	0.90
156-59-2	cis-1,2-Dichloroethene	43		5.0	0.85
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.70
124-48-1	Dibromochloromethane	5.0	U	5.0	0.90
96-12-8	1,2-Dibromo-3-Chloropropane	25	U	25	3.4
106-93-4	1,2-Dibromoethane	5.0	U	5.0	1.2
74-95-3	Dibromomethane	5.0	U	5.0	1.4
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.65
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.70
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.65
75-71-8	Dichlorodifluoromethane	5.0	U	5.0	1.6
75-34-3	1,1-Dichloroethane	2.1	J	5.0	0.75
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	2.2	J	5.0	0.95
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.90
142-28-9	1,3-Dichloropropane	5.0	U	5.0	0.80
594-20-7	2,2-Dichloropropane	5.0	U	5.0	0.65
563-58-6	1,1-Dichloropropene	5.0	U	5.0	0.65
108-20-3	Diisopropyl ether	25	U	25	7.5
100-41-4	Ethylbenzene	5.0	U	5.0	0.85

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 | Lab Sample ID: 240-22510-2

Matrix: Water | Lab File ID: UXM7231.D

Analysis Method: 8260B | Date Collected: 03/27/2013 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 14:31

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	25	U	25	0.55
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.5
591-78-6	2-Hexanone	25	U	25	2.1
98-82-8	Isopropylbenzene	5.0	U	5.0	0.65
75-09-2	Methylene Chloride	3.5	J B	5.0	1.7
108-10-1	4-Methyl-2-pentanone	25	U	25	1.6
1634-04-4	Methyl tert-butyl ether	22		5.0	0.85
179601-23-1	m-Xylene & p-Xylene	10	U	10	1.2
91-20-3	Naphthalene	5.0	U	5.0	1.2
104-51-8	n-Butylbenzene	5.0	U	5.0	0.60
103-65-1	n-Propylbenzene	5.0	U	5.0	0.70
95-47-6	o-Xylene	5.0	U	5.0	0.70
99-87-6	p-Isopropyltoluene	5.0	U	5.0	0.60
135-98-8	sec-Butylbenzene	5.0	U	5.0	0.65
100-42-5	Styrene	5.0	U	5.0	0.55
994-05-8	Tert-amyl-methyl ether (TAME)	25	U	25	0.34
75-65-0	tert-Butyl alcohol	100	U	100	20
98-06-6	tert-Butylbenzene	5.0	U	5.0	0.65
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.2
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90
127-18-4	Tetrachloroethene	5.0	U	5.0	1.5
108-88-3	Toluene	5.0	U	5.0	0.65
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.95
87-61-6	1,2,3-Trichlorobenzene	5.0	U	5.0	0.85
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	0.75
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	1.1
79-01-6	Trichloroethene	170		5.0	0.85
75-69-4	Trichlorofluoromethane	5.0	U *	5.0	1.1
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	2.2
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	5.0	U	5.0	1.4
526-73-8	1,2,3-Trimethylbenzene	25	U	25	0.030
95-63-6	1,2,4-Trimethylbenzene	5.0	U	5.0	0.60
108-05-4	Vinyl acetate	10	U	10	0.95
75-01-4	Vinyl chloride	18		5.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Matrix: Water Lab File ID: UXM7231.D

Analysis Method: 8260B Date Collected: 03/27/2013 10:40

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 14:31

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	10	U	10	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	86		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Matrix: Water Lab File ID: UXM7231.D

Analysis Method: 8260B Date Collected: 03/27/2013 10:40

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 14:31

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 3 TIC Result Total: 24.35

CAS NO.	COMPOUND NAME	RT	RESULT	Q
78-78-4	Butane, 2-methyl-	2.48	17	T J N
109-67-1	1-Pentene	3.67	6.6	T J N
110-82-7	Cyclohexane	5.23	0.75	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27B-032713 | Lab Sample ID: 240-22510-3

Matrix: Water | Lab File ID: UXM7232.D

Analysis Method: 8260B | Date Collected: 03/27/2013 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 14:54

Soil Aliquot Vol: | Dilution Factor: 33.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	39	J	170	37
71-43-2	Benzene	33	U	33	4.3
108-86-1	Bromobenzene	33	U	33	4.3
74-97-5	Bromochloromethane	33	U	33	9.7
75-27-4	Bromodichloromethane	33	U	33	5.0
75-25-2	Bromoform	33	U	33	21
74-83-9	Bromomethane	33	U	33	14
78-93-3	2-Butanone	170	U	170	19
75-15-0	Carbon disulfide	33	U	33	4.3
56-23-5	Carbon tetrachloride	33	U	33	4.3
108-90-7	Chlorobenzene	33	U	33	5.0
75-00-3	Chloroethane	33	U	33	9.7
110-75-8	2-Chloroethyl vinyl ether	330	U	330	33
67-66-3	Chloroform	33	U	33	5.3
74-87-3	Chloromethane	33	U	33	10
95-49-8	2-Chlorotoluene	33	U	33	3.7
106-43-4	4-Chlorotoluene	33	U	33	6.0
156-59-2	cis-1,2-Dichloroethene	310		33	5.7
10061-01-5	cis-1,3-Dichloropropene	33	U	33	4.7
124-48-1	Dibromochloromethane	33	U	33	6.0
96-12-8	1,2-Dibromo-3-Chloropropane	170	U	170	22
106-93-4	1,2-Dibromoethane	33	U	33	8.0
74-95-3	Dibromomethane	33	U	33	9.3
95-50-1	1,2-Dichlorobenzene	33	U	33	4.3
541-73-1	1,3-Dichlorobenzene	33	U	33	4.7
106-46-7	1,4-Dichlorobenzene	33	U	33	4.3
75-71-8	Dichlorodifluoromethane	33	U	33	10
75-34-3	1,1-Dichloroethane	33	U	33	5.0
107-06-2	1,2-Dichloroethane	33	U	33	7.3
75-35-4	1,1-Dichloroethene	9.8	J	33	6.3
78-87-5	1,2-Dichloropropane	33	U	33	6.0
142-28-9	1,3-Dichloropropane	33	U	33	5.3
594-20-7	2,2-Dichloropropane	33	U	33	4.3
563-58-6	1,1-Dichloropropene	33	U	33	4.3
108-20-3	Diisopropyl ether	170	U	170	50
100-41-4	Ethylbenzene	33	U	33	5.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27B-032713 | Lab Sample ID: 240-22510-3

Matrix: Water | Lab File ID: UXM7232.D

Analysis Method: 8260B | Date Collected: 03/27/2013 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 14:54

Soil Aliquot Vol: | Dilution Factor: 33.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	170	U	170	3.7
87-68-3	Hexachlorobutadiene	33	U	33	10
591-78-6	2-Hexanone	170	U	170	14
98-82-8	Isopropylbenzene	33	U	33	4.3
75-09-2	Methylene Chloride	25	J B	33	11
108-10-1	4-Methyl-2-pentanone	170	U	170	11
1634-04-4	Methyl tert-butyl ether	33	U	33	5.7
179601-23-1	m-Xylene & p-Xylene	67	U	67	8.0
91-20-3	Naphthalene	33	U	33	8.0
104-51-8	n-Butylbenzene	33	U	33	4.0
103-65-1	n-Propylbenzene	33	U	33	4.7
95-47-6	o-Xylene	33	U	33	4.7
99-87-6	p-Isopropyltoluene	33	U	33	4.0
135-98-8	sec-Butylbenzene	33	U	33	4.3
100-42-5	Styrene	33	U	33	3.7
994-05-8	Tert-amyl-methyl ether (TAME)	170	U	170	2.2
75-65-0	tert-Butyl alcohol	670	U	670	130
98-06-6	tert-Butylbenzene	33	U	33	4.3
630-20-6	1,1,1,2-Tetrachloroethane	33	U	33	7.7
79-34-5	1,1,2,2-Tetrachloroethane	33	U	33	6.0
127-18-4	Tetrachloroethene	33	U	33	9.7
108-88-3	Toluene	33	U	33	4.3
156-60-5	trans-1,2-Dichloroethene	33	U	33	6.3
10061-02-6	trans-1,3-Dichloropropene	33	U	33	6.3
87-61-6	1,2,3-Trichlorobenzene	33	U	33	5.7
120-82-1	1,2,4-Trichlorobenzene	33	U	33	5.0
71-55-6	1,1,1-Trichloroethane	33	U	33	7.3
79-01-6	Trichloroethene	1000		33	5.7
75-69-4	Trichlorofluoromethane	33	U *	33	7.0
96-18-4	1,2,3-Trichloropropane	33	U	33	14
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	33	U	33	9.3
526-73-8	1,2,3-Trimethylbenzene	170	U	170	0.20
95-63-6	1,2,4-Trimethylbenzene	33	U	33	4.0
108-05-4	Vinyl acetate	67	U	67	6.3
75-01-4	Vinyl chloride	12	J	33	7.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Matrix: Water Lab File ID: UXM7232.D

Analysis Method: 8260B Date Collected: 03/27/2013 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 14:54

Soil Aliquot Vol: Dilution Factor: 33.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	67	U	67	9.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		66-117
1868-53-7	Dibromofluoromethane (Surr)	86		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Matrix: Water Lab File ID: UXM7232.D

Analysis Method: 8260B Date Collected: 03/27/2013 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 14:54

Soil Aliquot Vol: Dilution Factor: 33.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27C-032713 Lab Sample ID: 240-22510-4

Matrix: Water Lab File ID: UXM7233.D

Analysis Method: 8260B Date Collected: 03/27/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 15:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27C-032713 | Lab Sample ID: 240-22510-4

Matrix: Water | Lab File ID: UXM7233.D

Analysis Method: 8260B | Date Collected: 03/27/2013 13:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 15:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27C-032713 Lab Sample ID: 240-22510-4

Matrix: Water Lab File ID: UXM7233.D

Analysis Method: 8260B Date Collected: 03/27/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 15:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27C-032713 Lab Sample ID: 240-22510-4

Matrix: Water Lab File ID: UXM7233.D

Analysis Method: 8260B Date Collected: 03/27/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 15:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 1 TIC Result Total: 10

CAS NO.	COMPOUND NAME	RT	RESULT	Q
115-10-6	Dimethyl ether	1.77	10	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: TB-032713 | Lab Sample ID: 240-22510-1

Matrix: WQ | Lab File ID: UXM7230.D

Analysis Method: 8260B | Date Collected: 03/27/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.3	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: TB-032713 | Lab Sample ID: 240-22510-1

Matrix: WQ | Lab File ID: UXM7230.D

Analysis Method: 8260B | Date Collected: 03/27/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 14:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: TB-032713 Lab Sample ID: 240-22510-1

Matrix: WQ Lab File ID: UXM7230.D

Analysis Method: 8260B Date Collected: 03/27/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 14:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: TB-032713 Lab Sample ID: 240-22510-1

Matrix: WQ Lab File ID: UXM7230.D

Analysis Method: 8260B Date Collected: 03/27/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 14:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 | Lab Sample ID: 240-22510-8

Matrix: Water | Lab File ID: 0404028.D

Analysis Method: 8270D | Date Collected: 03/27/2013 09:43

Extract. Method: 3520C | Date Extracted: 04/02/2013 09:43

Sample wt/vol: 1040(mL) | Date Analyzed: 04/04/2013 18:07

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80506 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	3.5		0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	64		21-110
4165-62-2	Phenol-d5 (Surr)	69		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 | Lab Sample ID: 240-22510-9

Matrix: Water | Lab File ID: 0404029.D

Analysis Method: 8270D | Date Collected: 03/27/2013 10:54

Extract. Method: 3520C | Date Extracted: 04/02/2013 09:43

Sample wt/vol: 1030(mL) | Date Analyzed: 04/04/2013 18:29

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80506 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.97	U	0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		20-110
367-12-4	2-Fluorophenol (Surr)	54		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	71		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	54		21-110
4165-62-2	Phenol-d5 (Surr)	55		21-110
1718-51-0	Terphenyl-d14 (Surr)	55		24-110

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW24A-032713 Lab Sample ID: 240-22510-5

Matrix: Water Lab File ID: Z0032920.D

Analysis Method: RSK-175 Date Collected: 03/27/2013 14:10

Sample wt/vol: 17(mL) Date Analyzed: 03/29/2013 14:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79864 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.23	J	0.50	0.10
74-82-8	Methane	96	B	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	93		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Matrix: Water Lab File ID: Z0032918.D

Analysis Method: RSK-175 Date Collected: 03/27/2013 10:40

Sample wt/vol: 17(mL) Date Analyzed: 03/29/2013 14:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 79864 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	1.8		0.50	0.37
74-84-0	Ethane	3.2		0.50	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	95		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Matrix: Water Lab File ID: Z0040131.D

Analysis Method: RSK-175 Date Collected: 03/27/2013 10:40

Sample wt/vol: 17(mL) Date Analyzed: 04/01/2013 22:10

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80082 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	1700	B	5.0	0.98

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	86		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Matrix: Water Lab File ID: Z0040134.D

Analysis Method: RSK-175 Date Collected: 03/27/2013 11:40

Sample wt/vol: 17(mL) Date Analyzed: 04/01/2013 22:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80082 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	11	B	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	89		40-122

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW103A-032713 Lab Sample ID: 240-22510-6

Matrix: Water Lab File ID: P4000011.D

Analysis Method: 8082 Date Collected: 03/27/2013 14:37

Extraction Method: 3520C Date Extracted: 04/02/2013 09:46

Sample wt/vol: 990(mL) Date Analyzed: 04/03/2013 17:13

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: CLP-1 ID: 0.53(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 80466 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	1.0	U	1.0	0.17
11104-28-2	Aroclor 1221	1.0	U	1.0	0.13
11141-16-5	Aroclor 1232	1.0	U	1.0	0.16
53469-21-9	Aroclor 1242	1.0	U	1.0	0.22
12672-29-6	Aroclor 1248	1.0	U	1.0	0.10
11097-69-1	Aroclor 1254	1.0	U	1.0	0.16
11096-82-5	Aroclor 1260	1.0	U	1.0	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	63		23-136
2051-24-3	DCB Decachlorobiphenyl	66		10-130

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW103B-032713 | Lab Sample ID: 240-22510-7

Matrix: Water | Lab File ID: P4000012.D

Analysis Method: 8082 | Date Collected: 03/27/2013 15:37

Extraction Method: 3520C | Date Extracted: 04/02/2013 09:46

Sample wt/vol: 990(mL) | Date Analyzed: 04/03/2013 17:29

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP-1 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80466 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	1.0	U	1.0	0.17
11104-28-2	Aroclor 1221	1.0	U	1.0	0.13
11141-16-5	Aroclor 1232	1.0	U	1.0	0.16
53469-21-9	Aroclor 1242	1.0	U	1.0	0.22
12672-29-6	Aroclor 1248	1.0	U	1.0	0.10
11097-69-1	Aroclor 1254	1.0	U	1.0	0.16
11096-82-5	Aroclor 1260	1.0	U	1.0	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	63		23-136
2051-24-3	DCB Decachlorobipheny1	49		10-130

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 Lab Sample ID: 240-22510-8

Matrix: Water Lab File ID: 02APR13-perc-077.d

Analysis Method: 6850 Date Collected: 03/27/2013 09:43

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 12:03

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 Lab Sample ID: 240-22510-9

Matrix: Water Lab File ID: 02APR13-perc-078.d

Analysis Method: 6850 Date Collected: 03/27/2013 10:54

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 12:19

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	3.6		0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-96A-032713 Lab Sample ID: 240-22510-8

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 09:43

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	9.9	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.34	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	220	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	0.94	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	4.4	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	310	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.57	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	1.3	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	390	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	380	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-96B-032713 Lab Sample ID: 240-22510-9

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:54

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	8.3	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.8	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	600	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	45	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	1400	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	2.0	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.83	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	790	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	1400	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW24A-032713 Lab Sample ID: 240-22510-5

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 14:10

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	22	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.2	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	220	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	39	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	350	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.56	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	1.3	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	120	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.18	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	330	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.70	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	2.2	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	3.7	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	3.3	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	540	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.4	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	2.4	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	240	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.79	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	560	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	250	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.32	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	2.8	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 11:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.89	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.16	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	79	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	5.0	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	170	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.46	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	150	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	0.36	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	220	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.41	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW24A-032713 Lab Sample ID: 240-22510-5

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 14:10

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	17000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	420	200	81	ug/L			1	6010C
7440-09-7	Potassium	5400	5000	72	ug/L			1	6010C
7439-95-4	Magnesium	22000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	16000	30	0.82	ug/L		B	2	6010C
7440-23-5	Sodium	210000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	11000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	13000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	94000	200	81	ug/L			1	6010C
7440-09-7	Potassium	2900	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	24000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	32000	75	2.1	ug/L		B	5	6010C
7440-23-5	Sodium	260000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	16000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 11:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	18000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	270	200	81	ug/L			1	6010C
7440-09-7	Potassium	7100	5000	72	ug/L			1	6010C
7439-95-4	Magnesium	3200	5000	34	ug/L	J	B	1	6010C
7439-96-5	Manganese	110	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	89000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	7200	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-96A-032713 Lab Sample ID: 240-22510-8

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 09:43

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-96B-032713 Lab Sample ID: 240-22510-9

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:54

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW24A-032713 Lab Sample ID: 240-22510-5

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 14:10

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.17	0.20	0.12	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 11:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW24A-032713 Lab Sample ID: 240-22510-5

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 14:10

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	38	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	950	20	15	mg/L			1	160.1
16887-00-6	Chloride	510	5.0	0.50	mg/L			5	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.11	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	2.9	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.30	0.20	0.035	mg/L		B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW24A-032713 Lab Sample ID: 240-22510-5

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 14:10

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	3.5	1.0	0.24	mg/L			1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	38	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	1000	20	15	mg/L			1	160.1
16887-00-6	Chloride	690	5.0	0.50	mg/L			5	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	3.1	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	1.9	0.20	0.035	mg/L		B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW27A-032713 Lab Sample ID: 240-22510-2

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 10:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	2.6	1.0	0.24	mg/L			1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 11:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	45	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	310	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	170	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.14	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	7.7	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.20	0.20	0.035	mg/L		B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW27B-032713 Lab Sample ID: 240-22510-3

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG ID.:

Matrix: Water Date Sampled: 03/27/2013 11:40

Reporting Basis: WET Date Received: 03/28/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	2.1	1.0	0.24	mg/L			1	9060

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 240-22510-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	3/29/2013	4/1/2013	2	3	5
HG	UG/L	MRC-MW-96A-032713	240-22510-8	NM	3/27/2013	4/16/2013	4/16/2013	20	0	20
HG	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	4/1/2013	2	3	5
HG	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	4/1/2013	2	3	5
HG	UG/L	MRC-MW-96B-032713	240-22510-9	NM	3/27/2013	4/16/2013	4/16/2013	20	0	20
M	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	4/1/2013	2	3	5
M	UG/L	MRC-MW-96B-032713	240-22510-9	NM	3/27/2013	4/4/2013	4/5/2013	8	1	9
M	UG/L	MRC-MW-96A-032713	240-22510-8	NM	3/27/2013	4/4/2013	4/5/2013	8	1	9
M	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/4/2013	4/5/2013	8	1	9
M	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	3/29/2013	4/1/2013	2	3	5
M	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/4/2013	4/5/2013	8	1	9
M	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	4/1/2013	2	3	5
M	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	4/4/2013	4/5/2013	8	1	9
ALK	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
ALK	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
CL	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/9/2013	4/9/2013	13	0	13
CL	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	4/9/2013	4/9/2013	13	0	13
CL	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/9/2013	4/9/2013	13	0	13
DOC	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/9/2013	4/9/2013	13	0	13
DOC	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/9/2013	4/9/2013	13	0	13
DOC	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	4/9/2013	4/9/2013	13	0	13
NH3	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/3/2013	4/3/2013	7	0	7
NH3	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/3/2013	4/3/2013	7	0	7
NH3	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	4/3/2013	4/3/2013	7	0	7
NTA	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
NTA	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
NTA	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
NTI	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
NTI	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
NTI	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
OPO4	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
OPO4	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OPO4	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
PCL	UG/L	MRC-MW-96A-032713	240-22510-8	NM	3/27/2013	4/2/2013	4/3/2013	6	1	7
PCL	UG/L	MRC-MW-96B-032713	240-22510-9	NM	3/27/2013	4/2/2013	4/3/2013	6	1	7
PCS	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
PCS	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
PCS	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
SO4	MG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/10/2013	4/10/2013	14	0	14
SO4	MG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/6/2013	4/6/2013	10	0	10
SO4	MG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	4/10/2013	4/10/2013	14	0	14
OS	UG/L	MRC-MW-96B-032713	240-22510-9	NM	3/27/2013	4/2/2013	4/4/2013	6	2	8
OS	UG/L	MRC-MW-96A-032713	240-22510-8	NM	3/27/2013	4/2/2013	4/4/2013	6	2	8
OV	UG/L	MRC-MW-96B-032713	240-22510-9	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
OV	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
OV	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
OV	UG/L	MRC-MW27C-032713	240-22510-4	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
OV	UG/L	MRC-MW-96A-032713	240-22510-8	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
OV	UG/L	TB-032713	240-22510-1	NM	3/27/2013	4/4/2013	4/4/2013	8	0	8
ETHA	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ETHA	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
ETHA	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/1/2013	4/1/2013	5	0	5
ETHE	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
ETHE	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
ETHE	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/1/2013	4/1/2013	5	0	5
METH	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
METH	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/1/2013	4/1/2013	5	0	5
METH	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/1/2013	4/1/2013	5	0	5
OVG	UG/L	MRC-MW24A-032713	240-22510-5	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
OVG	UG/L	MRC-MW27B-032713	240-22510-3	NM	3/27/2013	4/1/2013	4/1/2013	5	0	5
OVG	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	4/1/2013	4/1/2013	5	0	5
OVG	UG/L	MRC-MW27A-032713	240-22510-2	NM	3/27/2013	3/29/2013	3/29/2013	2	0	2
PCB	UG/L	MRC-MW103A-032713	240-22510-6	NM	3/27/2013	4/2/2013	4/3/2013	6	1	7
PCB	UG/L	MRC-MW103B-032713	240-22510-7	NM	3/27/2013	4/2/2013	4/3/2013	6	1	7

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Tony Agnavage	3/27/13	114474
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
20251 Century Blvd Ste 200	(301)528-5552		
City Germantown	**State** MD	**Zip Code** 20874	**Site Contact**	**Lab Contact**
Project Name and Location (State) MRC GW Sampling MD	**Carrier/Waybill Number**	
Contract/Purchase Order/Quote No. 112I04795-02		

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	Total Metals	Dissolved Gases	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Mg, Na, Sol.	DOC	PCBs	Perchlorate	1,4 Dioxane
TB-032713	—	—		X						2			X									
MRC-MW27A-032713	3/27/13	1040		X			1	3	2	5			X	X	X	X	X	X	X			
MRC-MW27B-032713		1140		X									X	X	X	X	X	X	Y			
MRC-MW27C-032713		1310		X						3			X									
MRC-MW24A-032713		1410		X			1	3	2	2				X	X	X	X	X	X			
MRC-MW103A-032713		1437		X			2													X		
MRC-MW103B-032713		1537		X			2													X		
~~MRC-MW104A-032713~~				X			2		1	3			X	X							X	
~~MRC-MW104B-032713~~				X			2		1	3			X	X							X	
MRC-MW-96A-032713		0943											X	X							X	X
MRC-MW-96B-032713		1054											X	X							X	X

Special Instructions/ Conditions of Receipt

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Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For

ure retained

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

240-22510 Chain of Custody

	Date	Time		Date	Time
1. Relinquished By	3/27/13	1615	1. Received By	3/27/13	1615
2. Relinquished By	3/27/13	1712	2. Received By	3/28/13	0915
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22510

Client TetraTech Site Name MRC GW By: Jerry Burns
Cooler Received on 3/28/13 Opened on 3/28/13 (Signature)
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other
TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple
Packing material used: Bubble Wrap Foam Plastic Bag None Other
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   IR-GUN# 1 (CF –2 °C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   IR GUN# 4G (CF 0 °C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   IR GUN# 5G (CF 0 °C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   IR GUN# 8 (CF 0 °C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   ☒ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 each	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Did all bottles arrive in good condition (Unbroken)?	Yes	No
7. Could all bottle labels be reconciled with the COC?	Yes	No
8. Were correct bottle(s) used for the test(s) indicated?	Yes	No
9. Sufficient quantity received to perform indicated analyses?	Yes	No
10. Were sample(s) at the correct pH upon receipt?	Yes	No NA
11. Were VOAs on the COC?	Yes	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
13. Was a trip blank present in the cooler(s)?	Yes	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide Lot# 121809 -NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
27 A	<2, <2, <2	3/28/13	TB
27 B	<2, <2, <2	"	"
24 A	<2, <2, <2	"	"
96 A	<2	"	"
96 B	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
TA No#	3.6	1.6	1	ICE
Client Cooler	4.2	3.2	1	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22510-1

Login Number: 22510
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 03/29/13 01:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22510-1

Login Number: 22510
List Number: 1
Creator: Tecson, Jeffrey

List Source: TestAmerica Sacramento
List Creation: 03/29/13 10:39 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	-0.2
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW SAMPLING MD

Report Number: 240-22510-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and the 7470A Mercury analyses were performed at the TestAmerica Irvine laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 03/28/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.6 and 2.2 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-032713 (240-22510-1), MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3), MRC-MW27C-032713 (240-22510-4), MRC-MW-96A-032713 (240-22510-8) and MRC-MW-96B-032713 (240-22510-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/04/2013.

Methylene Chloride was detected in method blank MB 240-80572/5 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Several analytes were detected in method blank MB 240-80572/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Samples MRC-MW27A-032713 (240-22510-2)[5X], MRC-MW27B-032713 (240-22510-3)[33.33X], MRC-MW-96A-032713 (240-22510-8) [833.33X] and MRC-MW-96B-032713 (240-22510-9)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 80572 exceeded control limits for the following analyte(s): Trichlorofluoromthane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW-96A-032713 (240-22510-8) and MRC-MW-96B-032713 (240-22510-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/02/2013 and analyzed on 04/04/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES
Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 03/29/2013 and 04/01/2013.

Methane was detected in method blank MB 240-79864/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Methane was detected in method blank MB 240-80082/25 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW27A-032713 (240-22510-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the dissolved gases analyses. All other quality control parameters were within the acceptance limits.

POLYCHLORINATED BIPHENYLS (PCBS)
Samples MRC-MW103A-032713 (240-22510-6) and MRC-MW103B-032713 (240-22510-7) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 04/02/2013 and analyzed on 04/03/2013.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the PCBs analyses. All quality control parameters were within the acceptance limits.

PERCHLORATE
Samples MRC-MW-96A-032713 (240-22510-8) and MRC-MW-96B-032713 (240-22510-9) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/02/2013 and analyzed on 04/03/2013.

No difficulties were encountered during the perchlorate analyses. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 03/29/2013 and analyzed on 04/01/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-79873/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Samples MRC-MW27A-032713 (240-22510-2)[5X] and MRC-MW24A-032713 (240-22510-5)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3), MRC-MW24A-032713 (240-22510-5), MRC-MW-96A-032713 (240-22510-8) and MRC-MW-96B-032713 (240-22510-9) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/04/2013 and analyzed on 04/05/2013.

Molybdenum was detected in method blank MB 440-96231/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3), MRC-MW24A-032713 (240-22510-5), MRC-MW-96A-032713 (240-22510-8) and MRC-MW-96B-032713 (240-22510-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 03/29/2013 and 04/16/2013 and analyzed on 04/01/2013 and 04/16/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were

analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 03/29/2013.

No difficulties were encountered during the TDS analyses. All quality control parameters were within the acceptance limits.

ANIONS

Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 03/29/2013.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ANIONS

Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/06/2013, 04/09/2013 and 04/10/2013.

Chloride was detected in method blank MB 240-81324/10 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Samples MRC-MW27A-032713 (240-22510-2)[5X] and MRC-MW24A-032713 (240-22510-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ALKALINITY

Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/04/2013.

No difficulties were encountered during the alkalinity analyses. All quality control parameters were within the acceptance limits.

AMMONIA

Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/03/2013.

Ammonia (as N) was detected in method blank MB 240-80480/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the ammonia analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Samples MRC-MW27A-032713 (240-22510-2), MRC-MW27B-032713 (240-22510-3) and MRC-MW24A-032713 (240-22510-5) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/09/2013.

No difficulties were encountered during the TOC analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22510-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
RSK-175	Dissolved Gases (GC)	RSK	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6010C	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL CAN
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9060	Organic Carbon, Dissolved (DOC)	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22510-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22510-1	TB-032713	WQ	03/27/13 00:00	03/28/13 09:15
240-22510-2	MRC-MW27A-032713	Water	03/27/13 10:40	03/28/13 09:15
240-22510-3	MRC-MW27B-032713	Water	03/27/13 11:40	03/28/13 09:15
240-22510-4	MRC-MW27C-032713	Water	03/27/13 13:10	03/28/13 09:15
240-22510-5	MRC-MW24A-032713	Water	03/27/13 14:10	03/28/13 09:15
240-22510-6	MRC-MW103A-032713	Water	03/27/13 14:37	03/28/13 09:15
240-22510-7	MRC-MW103B-032713	Water	03/27/13 15:37	03/28/13 09:15
240-22510-8	MRC-MW-96A-032713	Water	03/27/13 09:43	03/28/13 09:15
240-22510-9	MRC-MW-96B-032713	Water	03/27/13 10:54	03/28/13 09:15

Detection Limit Exceptions Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22510-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260B	WQ	2-Butanone	ug/L	5.0	10
8260B	WQ	2-Hexanone	ug/L	5.0	10
8260B	WQ	4-Methyl-2-pentanone	ug/L	5.0	10
8260B	WQ	Acetone	ug/L	5.0	10
8260B	WQ	Diisopropyl ether	ug/L	5.0	10
8260B	WQ	tert-Butyl alcohol	ug/L	20	50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
*	LCS or LCSD exceeds the control limits
B	Compound was found in the blank and sample.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

LCMS

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: BFB3402.D BFB Injection Date: 11/27/2012

Instrument ID: A3UX16 BFB Injection Time: 15:03

Analysis Batch No.: 66473

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.5	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.3)1
176	95.0 - 101.0 % of mass 174	71.2	(95.1)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-66473/8	UXM9089.D	11/27/2012	17:59
	STD2 240-66473/9	UXM9090.D	11/27/2012	18:22
	STD3 240-66473/10	UXM9091.D	11/27/2012	18:44
	STD4 240-66473/11	UXM9092.D	11/27/2012	19:07
	STD5 240-66473/12	UXM9093.D	11/27/2012	19:30
	STD6 240-66473/13	UXM9094.D	11/27/2012	19:53

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: BFB297.D BFB Injection Date: 02/07/2013

Instrument ID: A3UX16 BFB Injection Time: 12:56

Analysis Batch No.: 74618

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.9	
75	30.0 - 60.0 % of mass 95	56.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	51.6	
175	5.0 - 9.0 % of mass 174	3.4	(6.5)1
176	95.0 - 101.0 % of mass 174	50.1	(97.1)1
177	5.0 - 9.0 % of mass 176	3.4	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-74618/2	UXM6218.D	02/07/2013	13:27
	STD8260 240-74618/3	UXM6219.D	02/07/2013	13:50
	STD8260 240-74618/4	UXM6220.D	02/07/2013	14:12
	STD8260 240-74618/5	UXM6221.D	02/07/2013	14:35
	STD8260 240-74618/6	UXM6222.D	02/07/2013	14:58
	STD8260 240-74618/7	UXM6223.D	02/07/2013	15:20
	ICV 240-74618/8	UXM6224.D	02/07/2013	15:43

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6395 0.5790	0.5949	0.6191	0.5701	0.5598	Ave		0.5937				5.1		15.0			
Ethyl ether	0.2957 0.2913	0.2805	0.3162	0.2908	0.2785	Ave		0.2922				4.6		15.0			
3-Chloro-1-propene	0.1657 0.1816	0.1589	0.1747	0.1684	0.1734	Ave		0.1704				4.6		15.0			
Diisopropyl ether	0.2885 0.3072	0.2714	0.3042	0.2883	0.2921	Ave		0.2920				4.4		15.0			
2-Chloro-1,3-butadiene	0.5541 0.6319	0.5394	0.6027	0.5733	0.5814	Ave		0.5805				5.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.9712 1.0865	0.9515	1.0602	1.0211	1.0411	Ave		1.0219				5.1		15.0			
~~Propionitrile~~	0.0336 0.0410	0.0390	0.0380	0.0379	0.0392	Ave		~~0.0381~~				6.4		15.0			
Ethyl acetate	0.2415 0.2708	0.2384	0.2467	0.2536	0.2545	Ave		0.2509				4.6		15.0			
Methacrylonitrile	0.2017 0.1992	0.1750	0.1941	0.1858	0.1896	Ave		0.1909				5.1		15.0			
~~Isobutyl alcohol~~	0.0071 0.0081	0.0070	0.0072	0.0075	0.0077	Ave		~~0.0074~~				5.5		15.0			
Tert-amyl-methyl ether (TAME)	0.7918 0.9098	0.8105	0.8835	0.8488	0.8716	Ave		0.8526				5.3		15.0			
n-Heptane	0.0550 0.0612	0.0566	0.0534	0.0500	0.0453	Ave		0.0536				10.0		15.0			
~~n-Butanol~~	0.0039 0.0055	0.0047	0.0054	0.0053	0.0055	Ave		~~0.0051~~				13.0		15.0			
Methyl methacrylate	0.2010 0.2422	0.1999	0.2231	0.2243	0.2270	Ave		0.2196				7.4		15.0			
~~2-Nitropropane~~	0.0355 +++++	0.0470	0.0403	0.0428	0.0485	Ave		~~0.0428~~				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0937 0.0872	0.0965	0.1030	0.0923	0.0852	Ave		0.0930				6.9		15.0			
1,2,3-Trimethylbenzene	2.4010 2.9673	2.3401	2.6960	2.6868	2.7750	Ave		2.6444				8.9		15.0			
2-Methylnaphthalene	0.8663 +++++	1.0537	1.0510	0.9969	0.7520	Ave		0.9440				14.0		15.0			
n-Butyl acetate	0.3213 0.3680	0.3124	0.3343	0.3499	0.3540	Ave		0.3400				6.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74618/7	UXM6223.D
Level 2	STD8260 240-74618/6	UXM6222.D
Level 3	STD8260 240-74618/5	UXM6221.D
Level 4	STD8260 240-74618/4	UXM6220.D
Level 5	STD8260 240-74618/3	UXM6219.D
Level 6	STD8260 240-74618/2	UXM6218.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1655 0.2139	0.1950	0.2117	0.2250	0.1770	Ave		0.1980				12.0		15.0			
Chloromethane	0.5058 0.4534	0.4913	0.4685	0.4467	0.4652	Ave		0.4718			0.1000	4.8		15.0			
Vinyl chloride	0.4479 0.4349	0.4543	0.4578	0.4328	0.4507	Ave		0.4464				2.3		15.0			
Bromomethane	0.1647 0.1134	0.1618	0.1243	0.1362	0.1072	Lin1	0.0733	0.1117							0.9930		0.9900
Chloroethane	0.3008 0.2699	0.2633	0.2651	0.2622	0.2584	Ave		0.2699				5.8		15.0			
Trichlorofluoromethane	0.1945 0.1767	0.1777	0.1872	0.1834	0.1598	Ave		0.1799				6.6		15.0			
Acrolein	0.0621 0.0714	0.0629	0.0667	0.0657	0.0611	Ave		0.0650				5.9		15.0			
1,1-Dichloroethene	0.2925 0.3178	0.2976	0.2885	0.2944	0.2961	Ave		0.2978				3.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1277 0.1255	0.1102	0.1219	0.1299	0.1021	Ave		0.1196				9.2		15.0			
Acetone	0.1631 0.1304	0.1249	0.1382	0.1245	0.1110	Ave		0.1320				13.0		15.0			
Iodomethane	0.3203 0.3505	0.3484	0.3203	0.3182	0.3277	Ave		0.3309				4.5		15.0			
Carbon disulfide	0.9006 1.1662	0.9102	0.9141	0.9835	1.0269	Ave		0.9836				10.0		15.0			
~~Acetonitrile~~	0.0501 0.0501	0.0368	0.0476	0.0422	0.0348	Ave		~~0.0436~~				15.0		15.0			
Methyl acetate	0.3200 0.3183	0.3023	0.3159	0.3003	0.2851	Ave		0.3070				4.4		15.0			
Methylene Chloride	0.4848 0.3837	0.4381	0.3679	0.3537	0.3640	Ave		0.3987				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0199 0.0200	0.0154	0.0200	0.0182	0.0142	Ave		0.0180				14.0		15.0			
Acrylonitrile	0.1454 0.1558	0.1411	0.1518	0.1445	0.1383	Ave		0.1462				4.5		15.0			
Methyl tert-butyl ether	0.9103 1.0586	0.9378	0.9098	0.9208	0.9452	Ave		0.9471				6.0		15.0			
trans-1,2-Dichloroethene	0.3352 0.3614	0.3383	0.3201	0.3225	0.3390	Ave		0.3361				4.4		15.0			
Hexane	0.0729 0.0745	0.0604	0.0768	0.0775	0.0594	Ave		0.0703				12.0		15.0			
1,1-Dichloroethane	0.7047 0.7867	0.7510	0.6985	0.6925	0.7265	Ave		0.7266			0.1000	5.0		15.0			
Vinyl acetate	0.0486 0.0680	0.0460	0.0541	0.0579	0.0610	Ave		0.0560				15.0		15.0			
2-Butanone	0.1932 0.1741	0.1465	0.1768	0.1602	0.1554	Ave		0.1677				10.0		15.0			
cis-1,2-Dichloroethene	0.3362 0.3742	0.3651	0.3392	0.3299	0.3496	Ave		0.3490				5.0		15.0			
2,2-Dichloropropane	0.2813 0.3509	0.2981	0.2821	0.3032	0.3241	Ave		0.3066				8.7		15.0			
Bromochloromethane	0.1382 0.1411	0.1314	0.1248	0.1258	0.1302	Ave		0.1319				5.0		15.0			
Tetrahydrofuran	0.2003 0.1123	0.1251	0.1133	0.1091	0.0977	Lin1	0.0706	0.1042							0.9920		0.9900
Chloroform	0.5694 0.6344	0.6062	0.5689	0.5595	0.5889	Ave		0.5879				4.8		15.0			
1,1,1-Trichloroethane	0.3357 0.4198	0.3545	0.3585	0.3720	0.3793	Ave		0.3700				7.8		15.0			
Cyclohexane	0.6018 0.7292	0.5994	0.6741	0.7267	0.6358	Ave		0.6611				8.8		15.0			
1,1-Dichloropropene	0.4526 0.5465	0.4899	0.4801	0.4880	0.4937	Ave		0.4918				6.2		15.0			
Carbon tetrachloride	0.2047 0.2871	0.2145	0.2204	0.2455	0.2522	Ave		0.2374				13.0		15.0			
1,2-Dichloroethane	0.5136 0.5650	0.5326	0.4994	0.4893	0.5154	Ave		0.5192				5.2		15.0			
Benzene	1.5256 1.6847	1.5537	1.4382	1.4263	1.5081	Ave		1.5228				6.2		15.0			
Trichloroethene	0.2530 0.2800	0.2635	0.2536	0.2460	0.2572	Ave		0.2589				4.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4063 0.5136	0.3939	0.4873	0.5164	0.4219	Ave		0.4566				12.0		15.0			
1,2-Dichloropropane	0.3429 0.4213	0.3676	0.3520	0.3598	0.3788	Ave		0.3704				7.5		15.0			
Dibromomethane	0.1600 0.1800	0.1687	0.1666	0.1599	0.1642	Ave		0.1666				4.5		15.0			
~~1,4-Dioxane~~	0.0022 0.0021	0.0014	0.0024	0.0019	0.0018	Qua	0.0828	~~0.0015~~	0						0.9960		0.9900
Bromodichloromethane	0.2757 0.4230	0.3164	0.3178	0.3358	0.3740	Ave		0.3405				15.0		15.0			
2-Chloroethyl vinyl ether	0.1018 0.1952	0.1176	0.1452	0.1527	0.1656	Lin1	-0.250	0.1854							0.9920		0.9900
cis-1,3-Dichloropropene	0.3128 0.5541	0.3599	0.3850	0.4141	0.4734	Qua	-0.115	0.3937	0.0041						1.0000		0.9900
4-Methyl-2-pentanone	0.2461 0.3546	0.2660	0.3018	0.3036	0.3113	Ave		0.2972				13.0		15.0			
Toluene	2.0335 2.4081	2.1481	2.0452	2.0049	2.1647	Ave		2.1341				7.0		15.0			
trans-1,3-Dichloropropene	0.3834 0.6923	0.4261	0.4661	0.5171	0.5955	Qua	-0.207	0.5016	0.0049						1.0000		0.9900
Ethyl methacrylate	0.3855 0.6573	0.4366	0.5000	0.5368	0.5946	Lin1	-0.374	0.6353							0.9950		0.9900
1,1,2-Trichloroethane	0.3513 0.3794	0.3500	0.3495	0.3401	0.3596	Ave		0.3550				3.8		15.0			
1,3-Dichloropropane	0.7041 0.8219	0.7485	0.7309	0.7176	0.7566	Ave		0.7466				5.6		15.0			
Tetrachloroethene	0.2394 0.2779	0.2485	0.2456	0.2474	0.2555	Ave		0.2524				5.4		15.0			
2-Hexanone	0.2555 0.3273	0.2530	0.2844	0.2914	0.3021	Ave		0.2856				9.9		15.0			
Dibromochloromethane	0.1965 0.3239	0.2072	0.2257	0.2453	0.2777	Qua	-0.067	0.2326	0.0023						1.0000		0.9900
1,2-Dibromoethane	0.2819 0.3505	0.3047	0.3100	0.3178	0.3332	Ave		0.3163				7.5		15.0			
Chlorobenzene	1.0721 1.2059	1.1200	1.0795	1.0433	1.1272	Ave		1.1080			0.3000	5.2		15.0			
1,1,1,2-Tetrachloroethane	0.2433 0.3561	0.2660	0.2702	0.2948	0.3211	Ave		0.2919				14.0		15.0			
Ethylbenzene	0.5250 0.6926	0.5782	0.5894	0.5867	0.6324	Ave		0.6007				9.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6327 0.9012	0.7126	0.7222	0.7393	0.8059	Ave		0.7523				12.0		15.0			
o-Xylene	0.6506 0.8703	0.7179	0.7372	0.7408	0.8089	Ave		0.7543				10.0		15.0			
Styrene	0.9693 1.4883	1.0506	1.1070	1.1627	1.3150	Lin1	-0.754	1.4178							0.9920		0.9900
Bromoform	0.0819 0.1516	0.0895	0.0988	0.1100	0.1259	Qua	-0.031	0.1013	0.0013		0.1000				1.0000		0.9900
Isopropylbenzene	1.4947 2.1214	1.6455	1.7370	1.7894	1.9033	Ave		1.7819				12.0		15.0			
1,1,2,2-Tetrachloroethane	0.9920 1.0231	1.0892	1.0509	1.0781	1.0457	Ave		1.0465			0.3000	3.4		15.0			
Bromobenzene	0.6528 0.7862	0.7346	0.7241	0.7347	0.7560	Ave		0.7314				6.1		15.0			
1,2,3-Trichloropropane	0.2749 0.2747	0.2936	0.2771	0.2874	0.2758	Ave		0.2806				2.8		15.0			
trans-1,4-Dichloro-2-butene	0.2602 0.3393	0.2990	0.2853	0.3115	0.3150	Ave		0.3017				9.0		15.0			
n-Propylbenzene	0.6560 0.9449	0.7868	0.8024	0.8571	0.8933	Ave		0.8234				12.0		15.0			
2-Chlorotoluene	0.7071 0.8315	0.7838	0.7649	0.7981	0.8052	Ave		0.7818				5.5		15.0			
1,3,5-Trimethylbenzene	2.2287 3.2654	2.5753	2.7581	2.9169	3.0305	Ave		2.7958				13.0		15.0			
4-Chlorotoluene	0.7086 0.8957	0.8509	0.7967	0.8218	0.8621	Ave		0.8226				7.9		15.0			
tert-Butylbenzene	1.8732 2.6788	2.1545	2.3587	2.4660	2.5571	Ave		2.3480				12.0		15.0			
1,2,4-Trimethylbenzene	2.3218 3.3539	2.7540	2.9061	2.9666	3.1301	Ave		2.9054				12.0		15.0			
sec-Butylbenzene	2.3987 3.5071	2.7725	3.0430	3.1790	3.2957	Ave		3.0327				13.0		15.0			
1,3-Dichlorobenzene	1.3883 1.5034	1.4458	1.4409	1.3903	1.4513	Ave		1.4367				3.0		15.0			
p-Isopropyltoluene	1.8920 2.7941	2.0620	2.3493	2.4668	2.5988	Ave		2.3605				14.0		15.0			
1,4-Dichlorobenzene	1.4766 1.5820	1.5509	1.5101	1.4725	1.5285	Ave		1.5201				2.8		15.0			
n-Butylbenzene	1.9276 2.7241	2.0408	2.2530	2.3479	2.5383	Ave		2.3053				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3922 1.4327	1.4047	1.3988	1.3238	1.4189	Ave		1.3952				2.7		15.0			
1,2-Dibromo-3-Chloropropane	0.0956 0.0865	0.0733	0.0919	0.0855	0.0925	Ave		0.0875				9.1		15.0			
1,3,5-Trichlorobenzene	0.7274 0.6156	0.6578	0.7250	0.6145	0.6672	Ave		0.6679				7.5		15.0			
1,2,4-Trichlorobenzene	0.6586 0.5021	0.5654	0.6525	0.5249	0.5808	Ave		0.5807				11.0		15.0			
Hexachlorobutadiene	0.2419 +++++	0.2174	0.2428	0.2049	0.2005	Ave		0.2215				9.0		15.0			
Naphthalene	1.8396 1.5435	1.5783	2.0618	1.7042	1.8696	Ave		1.7662				11.0		15.0			
1,2,3-Trichlorobenzene	0.5910 +++++	0.4794	0.6204	0.4598	0.4810	Ave		0.5263				14.0		15.0			
Dibromofluoromethane (Surr)	0.2318 0.2635	0.2444	0.2333	0.2312	0.2505	Ave		0.2425				5.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4018 0.4434	0.4134	0.4080	0.3932	0.4073	Ave		0.4112				4.2		15.0			
Toluene-d8 (Surr)	1.4581 1.8629	1.6195	1.6043	1.5883	1.7170	Ave		1.6417				8.3		15.0			
4-Bromofluorobenzene (Surr)	0.5145 0.6364	0.5417	0.5528	0.5472	0.5940	Ave		0.5645				7.7		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2922	0.3425		2.00	0.0100	17.2	50.0
Diisopropyl ether	Ave	0.2920	0.2760		10.0	0.0100	-5.5	50.0
Isobutyl alcohol	Ave	0.0074	0.0093		50.0	0.500	25.3	50.0
Cyclohexanone	Ave	0.0930	0.0304		20.0	0.200	-67.3*	50.0
1,2,3-Trimethylbenzene	Ave	2.644	2.994		0.0113	0.0100	13.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.2524		1.00	0.0100	27.4	50.0
Chloromethane	Ave	0.4718	0.4832	0.1000	1.00	0.0100	2.4	50.0
Vinyl chloride	Ave	0.4464	0.4783		1.00	0.0100	7.1	20.0
Bromomethane	Lin1		0.1130		1.00	0.0100	-5.4	50.0
Chloroethane	Ave	0.2699	0.2696		1.00	0.0100	-0.1	50.0
Trichlorofluoromethane	Ave	0.1799	0.2258		1.00	0.0100	25.5	50.0
Acrolein	Ave	0.0650	0.0737		20.0	0.0300	13.4	50.0
1,1-Dichloroethene	Ave	0.2978	0.2814		1.00	0.0100	-5.5	20.0
1,1,2-Trichloro-1,2,2-trichf luoroethane	Ave	0.1196	0.1469		1.00	0.0100	22.9	50.0
Acetone	Ave	0.1320	0.1147		10.0	0.0200	-13.1	50.0
Iodomethane	Ave	0.3309	0.3093		1.00	0.0100	-6.5	50.0
Carbon disulfide	Ave	0.9836	0.8873		1.00	0.0100	-9.8	50.0
Acetonitrile	Ave	0.0436	0.0440		20.0	0.0300	1.1	50.0
Methyl acetate	Ave	0.3070	0.2874		10.0	0.0100	-6.4	50.0
Methylene Chloride	Ave	0.3987	0.3316		1.00	0.0100	-16.8	50.0
tert-Butyl alcohol	Ave	0.0180	0.0180		50.0	0.200	0.4	50.0
Acrylonitrile	Ave	0.1462	0.1386		20.0	0.0300	-5.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8619		1.00	0.0100	-9.0	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3069		1.00	0.0100	-8.7	50.0
Hexane	Ave	0.0703	0.0802		1.00	0.0100	14.1	20.0
1,1-Dichloroethane	Ave	0.7266	0.6707	0.1000	1.00	0.0100	-7.7	50.0
Vinyl acetate	Ave	0.0560	0.0587		2.00	0.0100	4.8	50.0
2-Butanone	Ave	0.1677	0.1588		10.0	0.0200	-5.3	50.0
2,2-Dichloropropane	Ave	0.3066	0.2711		1.00	0.0100	-11.6	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3183		1.00	0.0100	-8.8	50.0
Bromochloromethane	Ave	0.1319	0.1204		1.00	0.0100	-8.7	50.0
Tetrahydrofuran	Lin1		0.1040		5.00	0.0100	-7.0	50.0
Chloroform	Ave	0.5879	0.5420		1.00	0.0100	-7.8	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3399		1.00	0.0100	-8.1	50.0
Cyclohexane	Ave	0.6611	0.6987		1.00	0.0100	5.7	50.0
1,1-Dichloropropene	Ave	0.4918	0.4846		1.00	0.0100	-1.5	50.0
Carbon tetrachloride	Ave	0.2374	0.2244		1.00	0.0100	-5.5	50.0
1,2-Dichloroethane	Ave	0.5192	0.4963		1.00	0.0100	-4.4	50.0
Benzene	Ave	1.523	1.401		1.00	0.0100	-8.0	50.0
Trichloroethene	Ave	0.2589	0.2498		1.00	0.0100	-3.5	50.0
1,2-Dichloropropane	Ave	0.3704	0.3538		1.00	0.0100	-4.5	20.0
Methylcyclohexane	Ave	0.4566	0.5013		1.00	0.0100	9.8	50.0
Dibromomethane	Ave	0.1666	0.1629		1.00	0.0100	-2.2	50.0
Bromodichloromethane	Ave	0.3405	0.3196		1.00	0.0100	-6.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.1380		10.0	0.0100	-12.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Qua		0.3718		1.00	0.0100	-10.9	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2941		10.0	0.0200	-1.1	50.0
Toluene	Ave	2.134	1.974		1.00	0.0100	-7.5	20.0
trans-1,3-Dichloropropene	Qua		0.4752		1.00	0.0100	-9.2	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3402		1.00	0.0100	-4.2	50.0
1,3-Dichloropropane	Ave	0.7466	0.7102		1.00	0.0100	-4.9	50.0
Tetrachloroethene	Ave	0.2524	0.2492		1.00	0.0100	-1.3	50.0
2-Hexanone	Ave	0.2856	0.2769		10.0	0.0200	-3.1	50.0
Dibromochloromethane	Qua		0.2262		1.00	0.0100	-8.3	50.0
1,2-Dibromoethane	Ave	0.3163	0.2994		1.00	0.0100	-5.4	50.0
Chlorobenzene	Ave	1.108	1.043	0.3000	1.00	0.0100	-5.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.2752		1.00	0.0100	-5.7	50.0
Ethylbenzene	Ave	0.6007	0.5731		1.00	0.0100	-4.6	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.7296		2.00	0.0200	-3.0	50.0
o-Xylene	Ave	0.7543	0.7415		1.00	0.0100	-1.7	50.0
Styrene	Lin1		1.192		1.00	0.0100	-10.6	50.0
Bromoform	Qua		0.1002	0.1000	1.00	0.0100	-8.6	50.0
Isopropylbenzene	Ave	1.782	1.763		1.00	0.0100	-1.1	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9414	0.3000	1.00	0.0100	-10.0	50.0
Bromobenzene	Ave	0.7314	0.6863		1.00	0.0100	-6.2	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2663		1.00	0.0100	-5.1	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.2780		1.00	0.0200	-7.9	50.0
n-Propylbenzene	Ave	0.8234	0.8304		1.00	0.0100	0.8	50.0
2-Chlorotoluene	Ave	0.7818	0.7600		1.00	0.0100	-2.8	50.0
1,3,5-Trimethylbenzene	Ave	2.796	2.751		1.00	0.0100	-1.6	50.0
4-Chlorotoluene	Ave	0.8226	0.7820		1.00	0.0100	-4.9	50.0
tert-Butylbenzene	Ave	2.348	2.325		1.00	0.0100	-1.0	50.0
1,2,4-Trimethylbenzene	Ave	2.905	2.871		1.00	0.0100	-1.2	50.0
sec-Butylbenzene	Ave	3.033	3.010		1.00	0.0100	-0.8	50.0
1,3-Dichlorobenzene	Ave	1.437	1.335		1.00	0.0100	-7.1	50.0
p-Isopropyltoluene	Ave	2.361	2.460		1.00	0.0100	4.2	50.0
1,4-Dichlorobenzene	Ave	1.520	1.416		1.00	0.0100	-6.8	50.0
n-Butylbenzene	Ave	2.305	2.347		1.00	0.0100	1.8	50.0
1,2-Dichlorobenzene	Ave	1.395	1.318		1.00	0.0100	-5.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0884		2.00	0.0100	0.9	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.5692		1.00	0.0100	-2.0	50.0
Hexachlorobutadiene	Ave	0.2215	0.1995		1.00	0.0100	-9.9	50.0
Naphthalene	Ave	1.766	2.025		1.00	0.0100	14.7	50.0
1,2,3-Trichlorobenzene	Ave	0.5263	0.5412		1.00	0.0100	2.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2031		0.00855	0.0102	-16.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3469		0.00861	0.0102	-15.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.642	1.430		0.00889	0.0102	-12.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.5199		0.00940	0.0102	-7.9	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: BFB3550.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX16 BFB Injection Time: 10:46

Analysis Batch No.: 80572

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.8	
75	30.0 - 60.0 % of mass 95	56.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	58.1	
175	5.0 - 9.0 % of mass 174	4.1	(7.1)1
176	95.0 - 101.0 % of mass 174	56.0	(96.3)1
177	5.0 - 9.0 % of mass 176	3.9	(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-80572/2	UXM7224.D	04/04/2013	11:39
	CCV 240-80572/3	UXM7225.D	04/04/2013	12:01
	LCS 240-80572/4	UXM7226.D	04/04/2013	12:24
	MB 240-80572/5	UXM7227.D	04/04/2013	12:47
TB-032713	240-22510-1	UXM7230.D	04/04/2013	14:09
MRC-MW27A-032713	240-22510-2	UXM7231.D	04/04/2013	14:31
MRC-MW27B-032713	240-22510-3	UXM7232.D	04/04/2013	14:54
MRC-MW27C-032713	240-22510-4	UXM7233.D	04/04/2013	15:16
MRC-MW-96A-032713	240-22510-8	UXM7234.D	04/04/2013	15:38
MRC-MW-96B-032713	240-22510-9	UXM7235.D	04/04/2013	16:01
	240-22494-F-45 MS	UXM7248.D	04/04/2013	20:51
	240-22494-G-45 MSD	UXM7249.D	04/04/2013	21:14

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVIS 240-80572/2 Calibration Date: 04/04/2013 11:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.3937		1.00	0.0100	98.8*	50.0
Chloromethane	Ave	0.4718	0.5702	0.1000	1.00	0.0100	20.9	50.0
Vinyl chloride	Ave	0.4464	0.5197		1.00	0.0100	16.4	20.0
Bromomethane	Lin1		0.1697		1.00	0.0100	-45.4	50.0
Chloroethane	Ave	0.2699	0.2105		1.00	0.0100	-22.0	50.0
Trichlorofluoromethane	Ave	0.1799	0.3853		1.00	0.0100	114.2*	50.0
Acrolein	Ave	0.0650	0.0572		20.0	0.100	-12.0	50.0
1,1-Dichloroethene	Ave	0.2978	0.2902		1.00	0.0100	-2.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1584		1.00	0.0100	32.4	50.0
Acetone	Ave	0.1320	0.1156		10.0	0.0200	-12.4	50.0
Iodomethane	Ave	0.3309	0.3594		1.00	0.0100	8.6	50.0
Carbon disulfide	Ave	0.9836	0.8444		1.00	0.0100	-14.2	50.0
Acetonitrile	Ave	0.0436	0.0503		20.0	0.100	15.5	50.0
Methyl acetate	Ave	0.3070	0.2711		10.0	0.0200	-11.7	50.0
Methylene Chloride	Ave	0.3987	0.4221		1.00	0.0100	5.9	50.0
tert-Butyl alcohol	Ave	0.0180	0.0159		50.0	0.200	-11.5	50.0
Acrylonitrile	Ave	0.1462	0.1430		20.0	0.0200	-2.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8294		1.00	0.0100	-12.4	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3455		1.00	0.0100	2.8	50.0
Hexane	Ave	0.0703	0.0566		1.00	0.0100	-19.5	20.0
1,1-Dichloroethane	Ave	0.7266	0.7418	0.1000	1.00	0.0100	2.1	50.0
Vinyl acetate	Ave	0.0560	0.0532		2.00	0.0100	-4.9	50.0
2-Butanone	Ave	0.1677	0.1511		10.0	0.0200	-9.9	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3698		1.00	0.0100	5.9	50.0
2,2-Dichloropropane	Ave	0.3066	0.2947		1.00	0.0100	-3.9	50.0
Bromochloromethane	Ave	0.1319	0.1419		1.00	0.0100	7.5	50.0
Tetrahydrofuran	Lin1		0.0890		5.00	0.0100	-21.4	50.0
Chloroform	Ave	0.5879	0.6271		1.00	0.0100	6.7	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3777		1.00	0.0100	2.1	50.0
Cyclohexane	Ave	0.6611	0.6324		1.00	0.0100	-4.4	50.0
1,1-Dichloropropene	Ave	0.4918	0.5245		1.00	0.0100	6.7	50.0
Carbon tetrachloride	Ave	0.2374	0.2611		1.00	0.0100	10.0	50.0
1,2-Dichloroethane	Ave	0.5192	0.5382		1.00	0.0100	3.7	50.0
Benzene	Ave	1.523	1.612		1.00	0.0100	5.9	50.0
Trichloroethene	Ave	0.2589	0.2823		1.00	0.0100	9.0	50.0
Methylcyclohexane	Ave	0.4566	0.4321		1.00	0.0100	-5.4	50.0
1,2-Dichloropropane	Ave	0.3704	0.3966		1.00	0.0100	7.1	20.0
Dibromomethane	Ave	0.1666	0.1735		1.00	0.0100	4.2	50.0
1,4-Dioxane	Qua		0.0028		50.0	0.500	-58.2*	50.0
Bromodichloromethane	Ave	0.3405	0.3587		1.00	0.0100	5.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVIS 240-80572/2 Calibration Date: 04/04/2013 11:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.1444		10.0	0.0200	-15.4	50.0
cis-1,3-Dichloropropene	Qua		0.4058		1.00	0.0100	-3.7	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2650		10.0	0.0200	-10.9	50.0
Toluene	Ave	2.134	2.231		1.00	0.0100	4.5	20.0
trans-1,3-Dichloropropene	Qua		0.4816		1.00	0.0100	-8.1	50.0
Ethyl methacrylate	Lin1		0.5057		1.00	0.0100	-14.5	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3674		1.00	0.0100	3.5	50.0
1,3-Dichloropropane	Ave	0.7466	0.7675		1.00	0.0100	2.8	50.0
Tetrachloroethene	Ave	0.2524	0.2861		1.00	0.0100	13.4	50.0
2-Hexanone	Ave	0.2856	0.2633		10.0	0.0200	-7.8	50.0
Dibromochloromethane	Qua		0.2544		1.00	0.0100	1.8	50.0
1,2-Dibromoethane	Ave	0.3163	0.3177		1.00	0.0100	0.4	50.0
Chlorobenzene	Ave	1.108	1.204	0.3000	1.00	0.0100	8.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.3340		1.00	0.0100	14.4	50.0
Ethylbenzene	Ave	0.6007	0.6448		1.00	0.0100	7.3	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.8327		2.00	0.0200	10.7	50.0
o-Xylene	Ave	0.7543	0.8465		1.00	0.0100	12.2	50.0
Styrene	Lin1		1.298		1.00	0.0100	-3.2	50.0
Bromoform	Qua		0.1062	0.1000	1.00	0.0100	-3.8	50.0
Isopropylbenzene	Ave	1.782	1.955		1.00	0.0100	9.7	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	1.019	0.3000	1.00	0.0100	-2.6	50.0
Bromobenzene	Ave	0.7314	0.7907		1.00	0.0100	8.1	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2728		1.00	0.0100	-2.8	50.0
~~trans-1,4-Dichloro-2-butene~~	Ave	0.3017	0.1969		1.00	0.0100	~~-34.7~~	50.0
n-Propylbenzene	Ave	0.8234	0.9185		1.00	0.0100	11.6	50.0
2-Chlorotoluene	Ave	0.7818	0.8707		1.00	0.0100	11.4	50.0
1,3,5-Trimethylbenzene	Ave	2.796	3.219		1.00	0.0100	15.1	50.0
4-Chlorotoluene	Ave	0.8226	0.9073		1.00	0.0100	10.3	50.0
tert-Butylbenzene	Ave	2.348	2.432		1.00	0.0100	3.6	50.0
1,2,4-Trimethylbenzene	Ave	2.905	3.376		1.00	0.0100	16.2	50.0
sec-Butylbenzene	Ave	3.033	3.510		1.00	0.0100	15.7	50.0
1,3-Dichlorobenzene	Ave	1.437	1.592		1.00	0.0100	10.8	50.0
p-Isopropyltoluene	Ave	2.361	2.779		1.00	0.0100	17.7	50.0
1,4-Dichlorobenzene	Ave	1.520	1.656		1.00	0.0100	9.0	50.0
n-Butylbenzene	Ave	2.305	2.687		1.00	0.0100	16.6	50.0
1,2-Dichlorobenzene	Ave	1.395	1.597		1.00	0.0100	14.5	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0818		2.00	0.0100	-6.6	50.0
~~1,3,5-Trichlorobenzene~~	Ave	0.6679	0.8484		1.00	0.0100	~~27.0~~	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.7232		1.00	0.0100	24.5	50.0
Hexachlorobutadiene	Ave	0.2215	0.2995		1.00	0.0100	35.2	50.0
Naphthalene	Ave	1.766	1.997		1.00	0.0100	13.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVIS 240-80572/2 Calibration Date: 04/04/2013 11:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5263	0.6899		1.00	0.0100	31.1	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2177		0.00917	0.0102	-10.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3560		0.00884	0.0102	-13.4	50.0
Toluene-d8 (Surr)	Ave	1.642	1.502		0.00934	0.0102	-8.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.5152		0.00932	0.0102	-8.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCV 240-80572/3 Calibration Date: 04/04/2013 12:01

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM7225.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5937	0.6113		2.00	0.0100	3.0	50.0
Ethyl ether	Ave	0.2922	0.3216		2.00	0.0100	10.1	50.0
3-Chloro-1-propene	Ave	0.1704	0.1548		2.00	0.0100	-9.2	50.0
Diisopropyl ether	Ave	0.2920	0.3029		10.0	0.0500	3.8	50.0
2-Chloro-1,3-butadiene	Ave	0.5805	0.6656		2.00	0.0100	14.7	50.0
Ethyl-t-butyl ether (ETBE)	Ave	1.022	0.9185		5.00	0.0100	-10.1	50.0
Propionitrile	Ave	0.0381	0.0433		4.00	0.0200	13.4	50.0
Ethyl acetate	Ave	0.2509	0.2679		4.00	0.0200	6.7	50.0
Methacrylonitrile	Ave	0.1909	0.2128		2.00	0.0100	11.5	50.0
Isobutyl alcohol	Ave	0.0074	0.0074		50.0	0.200	-0.3	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.8526	0.6479		5.00	0.0100	-24.0	50.0
n-Heptane	Ave	0.0536	0.0442		1.00	0.0100	-17.6	50.0
n-Butanol	Ave	0.0051	0.0043		50.0	0.200	-15.1	50.0
Methyl methacrylate	Ave	0.2196	0.2314		2.00	0.0100	5.4	50.0
2-Nitropropane	Ave	0.0428	0.0364		2.00	0.0200	-14.9	50.0
Cyclohexanone	Ave	0.0930	0.1071		20.0	0.100	15.2	50.0
1,2,3-Trimethylbenzene	Ave	2.644	3.344		0.0126	0.0100	26.5	50.0
2-Methylnaphthalene	Ave	0.9440	0.6261		5.00	0.0200	-33.7	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: UXM7227.D Lab Sample ID: MB 240-80572/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/04/2013 12:47

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80572/4	UXM7226.D	04/04/2013 12:24
TB-032713	240-22510-1	UXM7230.D	04/04/2013 14:09
MRC-MW27A-032713	240-22510-2	UXM7231.D	04/04/2013 14:31
MRC-MW27B-032713	240-22510-3	UXM7232.D	04/04/2013 14:54
MRC-MW27C-032713	240-22510-4	UXM7233.D	04/04/2013 15:16
MRC-MW-96A-032713	240-22510-8	UXM7234.D	04/04/2013 15:38
MRC-MW-96B-032713	240-22510-9	UXM7235.D	04/04/2013 16:01
	240-22494-F-45 MS	UXM7248.D	04/04/2013 20:51
	240-22494-G-45 MSD	UXM7249.D	04/04/2013 21:14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80572/5

Matrix: Water | Lab File ID: UXM7227.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 12:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.138	J	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80572/5

Matrix: Water | Lab File ID: UXM7227.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 12:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	0.831	J	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.18		1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	0.440	J	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	0.288	J	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80572/5

Matrix: Water | Lab File ID: UXM7227.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 12:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80572/5

Matrix: Water Lab File ID: UXM7227.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/04/2013 12:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80572 Units: ug/L

Number TICs Found: 1 TIC Result Total: 10.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
78-83-1	Isobutyl alcohol	5.35	10.9	J

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7226.D

Lab ID: LCS 240-80572/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	17.1	86	43-136	
Benzene	10.0	10.4	104	83-112	
Bromobenzene	10.0	10.5	105	76-115	
Bromochloromethane	10.0	10.1	101	77-120	
Bromodichloromethane	10.0	10.1	101	72-121	
Bromoform	10.0	8.79	88	40-131	
Bromomethane	10.0	12.1	121	11-185	
2-Butanone	20.0	17.8	89	60-126	
Carbon disulfide	10.0	8.96	90	62-142	
Carbon tetrachloride	10.0	10.1	101	66-128	
Chlorobenzene	10.0	10.6	106	85-110	
Chloroethane	10.0	6.72	67	25-153	
2-Chloroethyl vinyl ether	10.0	8.51 J	85	52-131	
Chloroform	10.0	10.1	101	79-117	
Chloromethane	10.0	9.96	100	44-126	
2-Chlorotoluene	10.0	10.6	106	76-116	
4-Chlorotoluene	10.0	10.5	105	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.79	88	61-115	
Dibromochloromethane	10.0	9.39	94	64-119	
1,2-Dibromo-3-Chloropropane	10.0	9.01	90	42-136	
1,2-Dibromoethane	10.0	9.84	98	79-113	
Dibromomethane	10.0	10.2	102	81-120	
1,2-Dichlorobenzene	10.0	10.7	107	81-110	
1,3-Dichlorobenzene	10.0	10.6	106	80-110	
1,4-Dichlorobenzene	10.0	10.4	104	82-110	
Dichlorodifluoromethane	10.0	10.7	107	19-129	
1,1-Dichloroethane	10.0	9.93	99	82-115	
1,2-Dichloroethane	10.0	10.4	104	71-127	
1,1-Dichloroethene	10.0	9.91	99	78-131	
1,2-Dichloropropane	10.0	10.4	104	81-115	
1,3-Dichloropropane	10.0	10.1	101	79-116	
2,2-Dichloropropane	10.0	8.56	86	50-129	
1,1-Dichloropropene	10.0	10.1	101	83-114	
Diisopropyl ether	10.0	10.0	100	77-118	
Ethylbenzene	10.0	10.3	103	83-112	
Hexachlorobutadiene	10.0	11.2	112	36-134	
2-Hexanone	20.0	17.9	90	55-133	
Isopropylbenzene	10.0	10.3	103	75-114	
Methylene Chloride	10.0	10.3	103	66-131	
4-Methyl-2-pentanone	20.0	18.0	90	63-128	
Methyl tert-butyl ether	10.0	8.49	85	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7226.D

Lab ID: LCS 240-80572/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	21.3	107	83-113	
Naphthalene	10.0	9.87	99	32-141	
n-Butylbenzene	10.0	10.9	109	66-125	
n-Propylbenzene	10.0	10.9	109	74-121	
o-Xylene	10.0	10.5	105	83-113	
p-Isopropyltoluene	10.0	11.4	114	74-120	
sec-Butylbenzene	10.0	10.6	106	70-117	
Styrene	10.0	9.61	96	79-114	
tert-Butyl alcohol	200	163	81	70-130	
tert-Butylbenzene	10.0	9.61	96	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.7	107	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.22	92	68-118	
Tetrachloroethene	10.0	10.5	105	79-114	
Toluene	10.0	10.0	100	84-111	
trans-1,2-Dichloroethene	10.0	9.76	98	83-117	
trans-1,3-Dichloropropene	10.0	8.61	86	58-117	
1,2,3-Trichlorobenzene	10.0	10.8	108	54-126	
1,2,4-Trichlorobenzene	10.0	10.3	103	48-135	
1,1,1-Trichloroethane	10.0	9.45	95	74-118	
Trichloroethene	10.0	10.5	105	76-117	
Trichlorofluoromethane	10.0	19.8	198	49-157	*
1,2,3-Trichloropropane	10.0	9.71	97	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	14.5	145	74-151	
1,2,3-Trimethylbenzene	10.0	12.9	129	70-130	
1,2,4-Trimethylbenzene	10.0	11.0	110	76-120	
Vinyl acetate	10.0	7.81	78	46-161	
Vinyl chloride	10.0	9.76	98	53-127	
Xylenes, Total	30.0	31.8	106	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7248.D

Lab ID: 240-22494-F-45 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20.0	5.0 U	17.2	86	33-145	
Benzene	10.0	1.0 U	10.7	107	72-121	
Bromobenzene	10.0	1.0 U	10.7	107	71-116	
Bromochloromethane	10.0	1.0 U	10.3	103	73-121	
Bromodichloromethane	10.0	1.0 U	9.53	95	67-120	
Bromoform	10.0	1.0 U	8.18	82	32-128	
Bromomethane	10.0	1.0 U	12.1	121	10-186	
2-Butanone	20.0	5.0 U	17.8	89	54-129	
Carbon disulfide	10.0	1.0 U	9.11	91	57-147	
Carbon tetrachloride	10.0	1.0 U	10.3	103	59-129	
Chlorobenzene	10.0	1.0 U	10.5	105	80-110	
Chloroethane	10.0	1.0 U	7.19	72	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0	10-150	F
Chloroform	10.0	1.0 U	10.4	104	76-118	
Chloromethane	10.0	1.0 U	9.60	96	33-132	
2-Chlorotoluene	10.0	1.0 U	10.4	104	69-117	
4-Chlorotoluene	10.0	1.0 U	10.4	104	71-116	
cis-1,2-Dichloroethene	10.0	1.0 U	10.3	103	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	7.95	80	51-110	
Dibromochloromethane	10.0	1.0 U	9.23	92	56-118	
1,2-Dibromo-3-Chloropropane	10.0	5.0 U	8.27	83	32-139	
1,2-Dibromoethane	10.0	1.0 U	9.71	97	74-113	
Dibromomethane	10.0	1.0 U	10.1	101	77-121	
1,2-Dichlorobenzene	10.0	1.0 U	11.1	111	75-111	
1,3-Dichlorobenzene	10.0	1.0 U	10.4	104	73-110	
1,4-Dichlorobenzene	10.0	1.0 U	10.3	103	75-110	
Dichlorodifluoromethane	10.0	1.0 U	13.8	138	17-128	F
1,1-Dichloroethane	10.0	1.0 U	10.3	103	79-116	
1,2-Dichloroethane	10.0	1.0 U	10.4	104	68-129	
1,1-Dichloroethene	10.0	1.0 U	10.8	108	74-135	
1,2-Dichloropropane	10.0	1.0 U	10.5	105	78-115	
1,3-Dichloropropane	10.0	1.0 U	10.2	102	74-118	
2,2-Dichloropropane	10.0	1.0 U	7.94	79	38-127	
1,1-Dichloropropene	10.0	1.0 U	10.6	106	80-114	
Diisopropyl ether	10.0	5.0 U	10.1	101	73-118	
Ethylbenzene	10.0	1.0 U	10.5	105	75-116	
Hexachlorobutadiene	10.0	1.0 U	10.6	106	27-132	
2-Hexanone	20.0	5.0 U	19.6	98	47-139	
Isopropylbenzene	10.0	1.0 U	10.6	106	68-116	
Methylene Chloride	10.0	1.0 U	9.42	94	63-128	
4-Methyl-2-pentanone	20.0	5.0 U	17.9	89	56-131	
Methyl tert-butyl ether	10.0	1.0 U	8.73	87	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7248.D

Lab ID: 240-22494-F-45 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	2.0 U	21.3	106	75-117	
Naphthalene	10.0	1.0 U	11.5	115	15-158	
n-Butylbenzene	10.0	1.0 U	10.8	108	56-127	
n-Propylbenzene	10.0	1.0 U	11.1	111	64-124	
o-Xylene	10.0	1.0 U	10.9	109	76-116	
p-Isopropyltoluene	10.0	1.0 U	11.3	113	64-122	
sec-Butylbenzene	10.0	1.0 U	10.9	109	60-119	
Styrene	10.0	1.0 U	9.41	94	71-117	
tert-Butyl alcohol	200	20 U	168	84	70-130	
tert-Butylbenzene	10.0	1.0 U	10.8	108	61-119	
1,1,1,2-Tetrachloroethane	10.0	1.0 U	10.4	104	64-118	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.09	91	63-122	
Tetrachloroethene	10.0	1.0 U	11.0	110	70-117	
Toluene	10.0	1.0 U	10.3	103	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	10.1	101	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	7.88	79	46-116	
1,2,3-Trichlorobenzene	10.0	1.0 U	10.9	109	45-129	
1,2,4-Trichlorobenzene	10.0	1.0 U	10.8	108	38-138	
1,1,1-Trichloroethane	10.0	1.0 U	9.74	97	68-121	
Trichloroethene	10.0	1.0 U	10.5	105	66-120	
Trichlorofluoromethane	10.0	1.0 U	21.5	215	46-157	F
1,2,3-Trichloropropane	10.0	1.0 U	9.89	99	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	17.7	177	70-152	F
1,2,3-Trimethylbenzene	10.0	5.0 U	12.9	129	70-130	
1,2,4-Trimethylbenzene	10.0	1.0 U	11.0	110	67-124	
Vinyl acetate	10.0	2.0 U	7.49	75	43-157	
Vinyl chloride	10.0	1.0 U	10.6	106	49-130	
Xylenes, Total	30.0	2.0 U	32.2	107	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7249.D

Lab ID: 240-22494-G-45 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	20.0	15.7	79	9	30	33-145	
Benzene	10.0	10.2	102	5	30	72-121	
Bromobenzene	10.0	10.2	102	5	30	71-116	
Bromochloromethane	10.0	9.92	99	4	30	73-121	
Bromodichloromethane	10.0	9.35	93	2	30	67-120	
Bromoform	10.0	7.85	79	4	30	32-128	
Bromomethane	10.0	12.5	125	3	30	10-186	
2-Butanone	20.0	16.5	82	8	30	54-129	
Carbon disulfide	10.0	8.66	87	5	30	57-147	
Carbon tetrachloride	10.0	9.75	97	6	30	59-129	
Chlorobenzene	10.0	10.1	101	4	30	80-110	
Chloroethane	10.0	7.16	72	0	30	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
Chloroform	10.0	9.87	99	5	30	76-118	
Chloromethane	10.0	9.46	95	1	30	33-132	
2-Chlorotoluene	10.0	10.3	103	1	30	69-117	
4-Chlorotoluene	10.0	10.1	101	3	30	71-116	
cis-1,2-Dichloroethene	10.0	9.96	100	3	30	70-120	
cis-1,3-Dichloropropene	10.0	7.97	80	0	30	51-110	
Dibromochloromethane	10.0	8.85	89	4	30	56-118	
1,2-Dibromo-3-Chloropropane	10.0	8.57	86	4	30	32-139	
1,2-Dibromoethane	10.0	9.18	92	6	30	74-113	
Dibromomethane	10.0	9.77	98	4	30	77-121	
1,2-Dichlorobenzene	10.0	10.6	106	4	30	75-111	
1,3-Dichlorobenzene	10.0	10.2	102	2	30	73-110	
1,4-Dichlorobenzene	10.0	10.0	100	2	30	75-110	
Dichlorodifluoromethane	10.0	10.6	106	26	30	17-128	
1,1-Dichloroethane	10.0	10.0	100	3	30	79-116	
1,2-Dichloroethane	10.0	10.0	100	4	30	68-129	
1,1-Dichloroethene	10.0	9.90	99	9	30	74-135	
1,2-Dichloropropane	10.0	10.0	100	4	30	78-115	
1,3-Dichloropropane	10.0	9.63	96	6	30	74-118	
2,2-Dichloropropane	10.0	7.97	80	0	30	38-127	
1,1-Dichloropropene	10.0	10.0	100	6	30	80-114	
Diisopropyl ether	10.0	9.92	99	2	30	73-118	
Ethylbenzene	10.0	10.1	101	4	30	75-116	
Hexachlorobutadiene	10.0	11.0	110	4	30	27-132	
2-Hexanone	20.0	17.0	85	14	30	47-139	
Isopropylbenzene	10.0	10.1	101	5	30	68-116	
Methylene Chloride	10.0	9.13	91	3	30	63-128	
4-Methyl-2-pentanone	20.0	16.9	84	6	30	56-131	
Methyl tert-butyl ether	10.0	8.35	84	4	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7249.D

Lab ID: 240-22494-G-45 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.5	103	4	30	75-117	
Naphthalene	10.0	10.3	103	11	30	15-158	
n-Butylbenzene	10.0	10.7	107	1	30	56-127	
n-Propylbenzene	10.0	10.4	104	6	30	64-124	
o-Xylene	10.0	10.4	104	5	30	76-116	
p-Isopropyltoluene	10.0	11.0	110	3	30	64-122	
sec-Butylbenzene	10.0	10.4	104	4	30	60-119	
Styrene	10.0	8.99	90	5	30	71-117	
tert-Butyl alcohol	200	163	82	3	30	70-130	
tert-Butylbenzene	10.0	10.3	103	4	30	61-119	
1,1,1,2-Tetrachloroethane	10.0	10.1	101	3	30	64-118	
1,1,2,2-Tetrachloroethane	10.0	8.96	90	1	30	63-122	
Tetrachloroethene	10.0	10.2	102	7	30	70-117	
Toluene	10.0	9.76	98	5	30	78-114	
trans-1,2-Dichloroethene	10.0	9.80	98	4	30	80-119	
trans-1,3-Dichloropropene	10.0	7.91	79	0	30	46-116	
1,2,3-Trichlorobenzene	10.0	11.4	114	4	30	45-129	
1,2,4-Trichlorobenzene	10.0	10.4	104	4	30	38-138	
1,1,1-Trichloroethane	10.0	9.20	92	6	30	68-121	
Trichloroethene	10.0	10.0	100	5	30	66-120	
Trichlorofluoromethane	10.0	18.6	186	14	30	46-157	F
1,2,3-Trichloropropane	10.0	9.18	92	7	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	14.2	142	22	30	70-152	
1,2,3-Trimethylbenzene	10.0	12.7	127	2	30	70-130	
1,2,4-Trimethylbenzene	10.0	10.7	107	3	30	67-124	
Vinyl acetate	10.0	6.76	68	10	30	43-157	
Vinyl chloride	10.0	9.94	99	6	30	49-130	
Xylenes, Total	30.0	30.9	103	4	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-032713	240-22510-1	88	91	87	80
MRC-MW27A-032713	240-22510-2	86	89	86	78
MRC-MW27B-032713	240-22510-3	86	89	85	77
MRC-MW27C-032713	240-22510-4	90	94	86	78
MRC-MW-96A-032713	240-22510-8	88	92	85	78
MRC-MW-96B-032713	240-22510-9	80	85	83	83
	MB 240-80572/5	85	88	83	80
	LCS 240-80572/4	90	88	92	97
	240-22494-F-45 MS	96	96	100	101
	240-22494-G-45 MSD	89	88	94	94

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Sample No.: STD8260 240-74618/4 Date Analyzed: 02/07/2013 14:12

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6220.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2086115	5.70	1321775	8.39	620128	10.64
UPPER LIMIT		4172230	6.20	2643550	8.89	1240256	11.14
LOWER LIMIT		1043058	5.20	660888	7.89	310064	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-74618/8		1919196	5.70	1214489	8.39	624981	10.64
CCVIS 240-80572/2		1804073	5.70	1133180	8.39	559607	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Sample No.: CCVIS 240-80572/2 Date Analyzed: 04/04/2013 11:39

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM7224.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1804073	5.70	1133180	8.39	559607	10.64
UPPER LIMIT		3608146	6.20	2266360	8.89	1119214	11.14
LOWER LIMIT		902037	5.20	566590	7.89	279804	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-80572/3		1938265	5.70	1158925	8.39	508094	10.64
LCS 240-80572/4		1804415	5.70	1147504	8.39	576158	10.64
MB 240-80572/5		1764033	5.70	1122499	8.39	491674	10.64
240-22510-1	TB-032713	1661275	5.70	1087962	8.39	449214	10.64
240-22510-2	MRC-MW27A-032713	1742914	5.70	1063369	8.39	474805	10.64
240-22510-3	MRC-MW27B-032713	1683727	5.70	1043680	8.39	459689	10.64
240-22510-4	MRC-MW27C-032713	1609389	5.70	1034658	8.39	456755	10.64
240-22510-8	MRC-MW-96A-032713	1621774	5.70	1008865	8.39	441949	10.64
240-22510-9	MRC-MW-96B-032713	1774879	5.70	1065167	8.39	490110	10.64
240-22494-F-45 MS		1647336	5.70	1020972	8.39	511003	10.64
240-22494-G-45 MSD		1784541	5.70	1108997	8.39	555268	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: 0402001.D DFTPP Injection Date: 04/02/2013

Instrument ID: A4AG2 DFTPP Injection Time: 12:23

Analysis Batch No.: 80256

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	33.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	39.8	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	54.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	24.4	
365	Greater than 0.75% of mass 198	3.0	
441	Present, but less than mass 443	11.3	
442	40.0 - 110.0% of mass 198	81.9	
443	15.0 - 24.0% of mass 442	16.5	(20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-80256/10	0402010.D	04/02/2013	15:37
	STD8 240-80256/11	0402011.D	04/02/2013	15:59
	STD7 240-80256/12	0402012.D	04/02/2013	16:20
	STD6 240-80256/13	0402013.D	04/02/2013	16:42
	STD5 240-80256/14	0402014.D	04/02/2013	17:04
	STD4 240-80256/15	0402015.D	04/02/2013	17:25
	STD3 240-80256/16	0402016.D	04/02/2013	17:47
	STD2 240-80256/17	0402017.D	04/02/2013	18:09
	STD1 240-80256/18	0402018.D	04/02/2013	18:30
	ICV 240-80256/19	0402019.D	04/02/2013	18:52

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 80256

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 15:37 Calibration End Date: 04/02/2013 18:30 Calibration ID: 14347

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80256/18	0402018.D
Level 2	STD2 240-80256/17	0402017.D
Level 3	STD3 240-80256/16	0402016.D
Level 4	STD4 240-80256/15	0402015.D
Level 5	STD5 240-80256/14	0402014.D
Level 6	STD6 240-80256/13	0402013.D
Level 7	STD7 240-80256/12	0402012.D
Level 8	STD8 240-80256/11	0402011.D
Level 9	STD9 240-80256/10	0402010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4626	0.5947 0.4586	0.5418 0.4905	0.5104 0.4924	0.4518	Ave		0.5004				9.7		20.0			
N-Nitrosodimethylamine	0.6313	0.4990 0.6556	0.5985 0.7034	0.5905 0.6926	0.6182	Ave		0.6236				10.0		20.0			
Pyridine	1.1465	1.0018 1.1644	1.1053 1.2576	1.1543 1.2317	1.1242	Ave		1.1482				6.8		20.0			
Benzaldehyde	0.9722	+++++ 0.9750	0.9910 1.0327	0.9986 0.9821	0.9975	Ave		0.9861			0.0100	2.7		20.0			
Phenol	1.4822	1.4876 1.5181	1.5297 1.6234	1.4911 1.5742	1.5147	Ave		1.5276			0.8000	3.2		20.0			
Aniline	1.9109	1.8808 1.9330	1.9101 2.0658	1.9156 2.0213	1.9062	Ave		1.9430				3.3		20.0			
Bis(2-chloroethyl)ether	1.2043	1.2155 1.2283	1.2180 1.3036	1.2254 1.2422	1.2263	Ave		1.2329			0.7000	2.5		20.0			
2-Chlorophenol	1.2321	1.1390 1.2499	1.2188 1.3507	1.2090 1.3177	1.2499	Ave		1.2459			0.8000	5.2		20.0			
1,3-Dichlorobenzene	1.3162	1.3059 1.3417	1.3655 1.4444	1.3436 1.4021	1.3328	Ave		1.3565				3.4		20.0			
1,4-Dichlorobenzene	1.3208	1.3775 1.3502	1.3771 1.4508	1.3656 1.4261	1.3560	Ave		1.3780				3.0		20.0			
Benzyl alcohol	0.7892	0.7191 0.8193	0.7447 0.8808	0.8073 0.8399	0.8005	Ave		0.8001				6.4		20.0			
1,2-Dichlorobenzene	1.2832	1.2935 1.2775	1.3126 1.3845	1.3293 1.3475	1.2793	Ave		1.3134				2.9		20.0			
2-Methylphenol	1.1241	1.0812 1.1532	1.1252 1.2421	1.1212 1.1898	1.1584	Ave		1.1494			0.7000	4.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-80256/19 Calibration Date: 04/02/2013 18:52

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0402019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4791		9.58	10.0	-4.2	30.0
N-Nitrosodimethylamine	Ave	0.6236	0.6482		10.4	10.0	3.9	30.0
Pyridine	Ave	1.148	1.229		10.7	10.0	7.1	30.0
Benzaldehyde	Ave	0.9861	1.013	0.0100	20.6	20.0	2.8	30.0
Phenol	Ave	1.528	1.615	0.8000	10.6	10.0	5.7	30.0
Aniline	Ave	1.943	2.017		10.4	10.0	3.8	30.0
Bis(2-chloroethyl)ether	Ave	1.233	1.265	0.7000	10.3	10.0	2.6	30.0
2-Chlorophenol	Ave	1.246	1.317	0.8000	10.6	10.0	5.7	30.0
1,3-Dichlorobenzene	Ave	1.357	1.411		10.4	10.0	4.0	30.0
1,4-Dichlorobenzene	Ave	1.378	1.456		10.6	10.0	5.7	30.0
Benzyl alcohol	Ave	0.8001	0.8654		10.8	10.0	8.2	30.0
1,2-Dichlorobenzene	Ave	1.313	1.369		10.4	10.0	4.2	30.0
2-Methylphenol	Ave	1.149	1.246	0.7000	10.8	10.0	8.4	30.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.279		7.42	7.20	3.0	30.0
Indene	Ave	2.172	2.288		21.1	20.0	5.4	30.0
3 & 4 Methylphenol	Ave	1.201	1.280		10.7	10.0	6.6	30.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.9049	0.5000	10.7	10.0	7.2	30.0
Acetophenone	Ave	1.689	1.774	0.0100	10.5	10.0	5.0	30.0
Hexachloroethane	Ave	0.5369	0.5770	0.3000	10.7	10.0	7.5	30.0
Nitrobenzene	Ave	0.3193	0.3415	0.2000	10.7	10.0	7.0	30.0
Isophorone	Ave	0.5793	0.6528	0.4000	11.3	10.0	12.7	30.0
2-Nitrophenol	Ave	0.1527	0.1711	0.1000	11.2	10.0	12.1	30.0
2,4-Dimethylphenol	Ave	0.3096	0.3211	0.2000	10.4	10.0	3.7	30.0
Benzoic acid	Qua		0.1825		23.4	20.0	16.8	30.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3832	0.3000	10.3	10.0	3.1	30.0
2,4-Dichlorophenol	Ave	0.2434	0.2633	0.2000	10.8	10.0	8.2	30.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2842		10.5	10.0	5.0	30.0
Naphthalene	Ave	0.9352	0.9825	0.7000	10.5	10.0	5.0	30.0
4-Chloroaniline	Ave	0.3945	0.4147	0.0100	10.5	10.0	5.1	30.0
Hexachlorobutadiene	Ave	0.1430	0.1490	0.0100	10.4	10.0	4.2	30.0
Caprolactam	Ave	0.0866	0.0988	0.0100	22.8	20.0	14.2	30.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2931	0.2000	11.1	10.0	11.0	30.0
2-Methylnaphthalene	Ave	0.6265	0.6516	0.4000	10.4	10.0	4.0	30.0
1-Methylnaphthalene	Ave	0.5852	0.6108		10.4	10.0	4.4	30.0
Hexachlorocyclopentadiene	Lin1		0.2716	0.0500	10.1	10.0	0.6	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4812	0.0100	10.5	10.0	5.4	30.0
2,4,6-Trichlorophenol	Ave	0.2852	0.3273	0.2000	11.5	10.0	14.8	30.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3440	0.2000	11.3	10.0	12.5	30.0
1,1'-Biphenyl	Ave	1.319	1.403	0.0100	10.6	10.0	6.3	30.0
2-Chloronaphthalene	Ave	0.9699	1.026	0.8000	10.6	10.0	5.7	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: 0404001.D DFTPP Injection Date: 04/04/2013

Instrument ID: A4AG2 DFTPP Injection Time: 08:23

Analysis Batch No.: 80506

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	35.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.2	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	55.0	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	23.1	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	10.1	
442	40.0 - 110.0% of mass 198	71.7	
443	15.0 - 24.0% of mass 442	14.6	(20.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-80506/2	0404002.D	04/04/2013	08:39
	MB 240-80230/11-A	0404005.D	04/04/2013	09:44
	LCS 240-80230/12-A	0404006.D	04/04/2013	10:05
MRC-MW-96A-032713	240-22510-8	0404028.D	04/04/2013	18:07
MRC-MW-96B-032713	240-22510-9	0404029.D	04/04/2013	18:29

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: STD6 240-80506/2 Calibration Date: 04/04/2013 08:39

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0404002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4757		9.51	10.0	-4.9	20.0
N-Nitrosodimethylamine	Ave	0.6236	0.6283		10.1	10.0	0.8	20.0
Pyridine	Ave	1.148	1.173		10.2	10.0	2.1	20.0
Benzaldehyde	Ave	0.9861	0.9646	0.0100	19.6	20.0	-2.2	20.0
Phenol	Ave	1.528	1.487	0.8000	9.73	10.0	-2.7	20.0
Aniline	Ave	1.943	1.915		9.85	10.0	-1.5	20.0
Bis(2-chloroethyl)ether	Ave	1.233	1.197	0.7000	9.71	10.0	-2.9	20.0
2-Chlorophenol	Ave	1.246	1.249	0.8000	10.0	10.0	0.2	20.0
1,3-Dichlorobenzene	Ave	1.357	1.352		9.97	10.0	-0.3	20.0
1,4-Dichlorobenzene	Ave	1.378	1.351		9.80	10.0	-2.0	20.0
Benzyl alcohol	Ave	0.8001	0.8187		10.2	10.0	2.3	20.0
1,2-Dichlorobenzene	Ave	1.313	1.283		9.76	10.0	-2.4	20.0
2-Methylphenol	Ave	1.149	1.144	0.7000	9.95	10.0	-0.5	20.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.184		9.53	10.0	-4.7	20.0
Indene	Ave	2.172	2.161		19.9	20.0	-0.5	20.0
3 & 4 Methylphenol	Ave	1.201	1.188		9.89	10.0	-1.1	20.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.8376	0.5000	9.92	10.0	-0.8	20.0
Acetophenone	Ave	1.689	1.651	0.0100	9.77	10.0	-2.3	20.0
Hexachloroethane	Ave	0.5369	0.5389	0.3000	10.0	10.0	0.4	20.0
Nitrobenzene	Ave	0.3193	0.3116	0.2000	9.76	10.0	-2.4	20.0
Isophorone	Ave	0.5793	0.5808	0.4000	10.0	10.0	0.3	20.0
2-Nitrophenol	Ave	0.1527	0.1619	0.1000	10.6	10.0	6.1	20.0
2,4-Dimethylphenol	Ave	0.3096	0.2988	0.2000	9.65	10.0	-3.5	20.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3634	0.3000	9.77	10.0	-2.3	20.0
Benzoic acid	Qua		0.1406		19.4	20.0	-3.2	20.0
2,4-Dichlorophenol	Ave	0.2434	0.2483	0.2000	10.2	10.0	2.0	20.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2700		9.98	10.0	-0.2	20.0
Naphthalene	Ave	0.9352	0.9082	0.7000	9.71	10.0	-2.9	20.0
4-Chloroaniline	Ave	0.3945	0.3954	0.0100	10.0	10.0	0.2	20.0
Hexachlorobutadiene	Ave	0.1430	0.1426	0.0100	9.97	10.0	-0.3	20.0
Caprolactam	Ave	0.0866	0.1019	0.0100	23.5	20.0	17.7	20.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2650	0.2000	10.0	10.0	0.4	20.0
2-Methylnaphthalene	Ave	0.6265	0.6162	0.4000	9.84	10.0	-1.6	20.0
1-Methylnaphthalene	Ave	0.5852	0.5754		9.83	10.0	-1.7	20.0
Hexachlorocyclopentadiene	Linl		0.2407	0.0500	8.96	10.0	-10.4	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4422	0.0100	9.69	10.0	-3.1	20.0
2,4,6-Trichlorophenol	Ave	0.2852	0.2948	0.2000	10.3	10.0	3.4	20.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3154	0.2000	10.3	10.0	3.2	20.0
1,1'-Biphenyl	Ave	1.319	1.265	0.0100	9.59	10.0	-4.1	20.0
2-Chloronaphthalene	Ave	0.9699	0.9484	0.8000	9.78	10.0	-2.2	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab File ID: 0404005.D Lab Sample ID: MB 240-80230/11-A

Matrix: Water Date Extracted: 04/02/2013 09:43

Instrument ID: A4AG2 Date Analyzed: 04/04/2013 09:44

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80230/12-A	0404006.D	04/04/2013 10:05
MRC-MW-96A-032713	240-22510-8	0404028.D	04/04/2013 18:07
MRC-MW-96B-032713	240-22510-9	0404029.D	04/04/2013 18:29

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80230/11-A

Matrix: Water | Lab File ID: 0404005.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/02/2013 09:43

Sample wt/vol: 1000(mL) | Date Analyzed: 04/04/2013 09:44

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80506 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	67		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	67		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	68		21-110
1718-51-0	Terphenyl-d14 (Surr)	55		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0404006.D

Lab ID: LCS 240-80230/12-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	14.5	72	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW-96A-032713	240-22510-8	66	69	64	61	81	58
MRC-MW-96B-032713	240-22510-9	54	55	54	50	71	55
	MB 240-80230/11-A	67	68	66	59	67	55
	LCS 240-80230/12-A	82	83	84	75	91	67

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Sample No.: STD6 240-80256/13 Date Analyzed: 04/02/2013 16:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0402013.D Heated Purge: (Y/N) N

Calibration ID: 14347

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		275675	5.95	1051353	7.07	595336	8.56
UPPER LIMIT		551350	6.45	2102706	7.57	1190672	9.06
LOWER LIMIT		137838	5.45	525677	6.57	297668	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80256/19		282466	5.95	1110982	7.07	634290	8.56
STD6 240-80506/2 CCVIS		219870	5.93	862620	7.05	499086	8.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Sample No.: STD6 240-80256/13 Date Analyzed: 04/02/2013 16:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0402013.D Heated Purge: (Y/N) N

Calibration ID: 14347

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1027373	9.83	1071893	12.40	891992	14.50
UPPER LIMIT		2054746	10.33	2143786	12.90	1783984	15.00
LOWER LIMIT		513687	9.33	535947	11.90	445996	14.00
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80256/19		1062456	9.83	1134298	12.40	957021	14.50
STD6 240-80506/2 CCVIS		856339	9.81	912342	12.38	803742	14.47

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Sample No.: STD6 240-80506/2 Date Analyzed: 04/04/2013 08:39

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0404002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		219870	5.93	862620	7.05	499086	8.54
UPPER LIMIT		439740	6.43	1725240	7.55	998172	9.04
LOWER LIMIT		109935	5.43	431310	6.55	249543	8.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-80230/11-A		218764	5.93	846625	7.05	501690	8.54
LCS 240-80230/12-A		225252	5.93	864793	7.05	511272	8.54
240-22510-8	MRC-MW-96A-032713	238233	5.93	960274	7.05	569190	8.54
240-22510-9	MRC-MW-96B-032713	261840	5.93	1023789	7.05	607404	8.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Sample No.: STD6 240-80506/2 Date Analyzed: 04/04/2013 08:39

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0404002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		856339	9.81	912342	12.38	803742	14.47
UPPER LIMIT		1712678	10.31	1824684	12.88	1607484	14.97
LOWER LIMIT		428170	9.31	456171	11.88	401871	13.97
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-80230/11-A		842215	9.81	884559	12.37	768165	14.46
LCS 240-80230/12-A		859780	9.81	920515	12.37	802585	14.46
240-22510-8	MRC-MW-96A-032713	965661	9.81	980485	12.38	578374	14.47
240-22510-9	MRC-MW-96B-032713	1042089	9.81	1043731	12.38	628264	14.47

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

Method 8082

Polychlorinated Biphenyls (PCBs) by Gas Chromatography by Method 8082

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: A2HP4 Start Date: 01/23/2013 11:22

Analysis Batch Number: 72952 End Date: 01/24/2013 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-72952/21 IC	1221/1254	01/23/2013 16:05	1		CLP-2 0.53(mm)
STD01 240-72952/22 IC		01/23/2013 16:21	1	P4000022.D	CLP-1 0.53(mm)
STD01 240-72952/22 IC		01/23/2013 16:21	1		CLP-2 0.53(mm)
STD02 240-72952/23 IC		01/23/2013 16:36	1	P4000023.D	CLP-1 0.53(mm)
STD02 240-72952/23 IC		01/23/2013 16:36	1		CLP-2 0.53(mm)
STD05 240-72952/24 IC		01/23/2013 16:52	1	P4000024.D	CLP-1 0.53(mm)
STD05 240-72952/24 IC		01/23/2013 16:52	1		CLP-2 0.53(mm)
STD1 240-72952/25 IC		01/23/2013 17:08	1	P4000025.D	CLP-1 0.53(mm)
STD1 240-72952/25 IC		01/23/2013 17:08	1		CLP-2 0.53(mm)
STD2 240-72952/26 IC		01/23/2013 17:23	1	P4000026.D	CLP-1 0.53(mm)
STD2 240-72952/26 IC		01/23/2013 17:23	1		CLP-2 0.53(mm)
STD005 240-72952/27 IC	1016/1260	01/23/2013 17:39	1	P4000027.D	CLP-1 0.53(mm)
STD005 240-72952/27 IC		01/23/2013 17:39	1		CLP-2 0.53(mm)
STD01 240-72952/28 IC		01/23/2013 17:55	1	P4000028.D	CLP-1 0.53(mm)
STD01 240-72952/28 IC		01/23/2013 17:55	1		CLP-2 0.53(mm)
STD02 240-72952/29 IC		01/23/2013 18:11	1	P4000029.D	CLP-1 0.53(mm)
STD02 240-72952/29 IC		01/23/2013 18:11	1		CLP-2 0.53(mm)
STD05 240-72952/30 ICRT		01/23/2013 18:26	1	P4000030.D	CLP-1 0.53(mm)
STD05 240-72952/30 ICRT		01/23/2013 18:26	1		CLP-2 0.53(mm)
STD1 240-72952/31 IC		01/23/2013 18:42	1	P4000031.D	CLP-1 0.53(mm)
STD1 240-72952/31 IC		01/23/2013 18:42	1		CLP-2 0.53(mm)
STD2 240-72952/32 IC		01/23/2013 18:58	1	P4000032.D	CLP-1 0.53(mm)
STD2 240-72952/32 IC		01/23/2013 18:58	1		CLP-2 0.53(mm)
STD005 240-72952/33 IC		01/23/2013 19:14	1		CLP-1 0.53(mm)
STD005 240-72952/33 IC		01/23/2013 19:14	1		CLP-2 0.53(mm)
STD01 240-72952/34 IC		01/23/2013 19:29	1		CLP-1 0.53(mm)
STD01 240-72952/34 IC		01/23/2013 19:29	1		CLP-2 0.53(mm)
STD02 240-72952/35 IC		01/23/2013 19:45	1		CLP-1 0.53(mm)
STD02 240-72952/35 IC		01/23/2013 19:45	1		CLP-2 0.53(mm)
STD05 240-72952/36 IC		01/23/2013 20:01	1		CLP-1 0.53(mm)
STD05 240-72952/36 IC		01/23/2013 20:01	1		CLP-2 0.53(mm)
STD1 240-72952/37 IC		01/23/2013 20:16	1		CLP-1 0.53(mm)
STD1 240-72952/37 IC		01/23/2013 20:16	1		CLP-2 0.53(mm)
STD2 240-72952/38 IC		01/23/2013 20:32	1		CLP-1 0.53(mm)
STD2 240-72952/38 IC		01/23/2013 20:32	1		CLP-2 0.53(mm)

8082

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: A2HP4 Start Date: 01/23/2013 11:22

Analysis Batch Number: 72952 End Date: 01/24/2013 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-72952/39 IC		01/23/2013 20:48	1		CLP-1 0.53(mm)
STD005 240-72952/39 IC		01/23/2013 20:48	1		CLP-2 0.53(mm)
STD01 240-72952/40 IC		01/23/2013 21:03	1		CLP-1 0.53(mm)
STD01 240-72952/40 IC		01/23/2013 21:03	1		CLP-2 0.53(mm)
STD02 240-72952/41 IC		01/23/2013 21:19	1		CLP-1 0.53(mm)
STD02 240-72952/41 IC		01/23/2013 21:19	1		CLP-2 0.53(mm)
STD05 240-72952/42 IC		01/23/2013 21:35	1		CLP-1 0.53(mm)
STD05 240-72952/42 IC		01/23/2013 21:35	1		CLP-2 0.53(mm)
STD1 240-72952/43 IC		01/23/2013 21:51	1		CLP-1 0.53(mm)
STD1 240-72952/43 IC		01/23/2013 21:51	1		CLP-2 0.53(mm)
STD2 240-72952/44 IC		01/23/2013 22:06	1		CLP-1 0.53(mm)
STD2 240-72952/44 IC		01/23/2013 22:06	1		CLP-2 0.53(mm)
ICV 240-72952/45		01/23/2013 22:22	1		CLP-1 0.53(mm)
ICV 240-72952/45		01/23/2013 22:22	1		CLP-2 0.53(mm)
ICV 240-72952/46		01/23/2013 22:38	1		CLP-1 0.53(mm)
ICV 240-72952/46		01/23/2013 22:38	1		CLP-2 0.53(mm)
ICV 240-72952/47		01/23/2013 22:53	1		CLP-1 0.53(mm)
ICV 240-72952/47		01/23/2013 22:53	1		CLP-2 0.53(mm)
ICV 240-72952/48		01/23/2013 23:09	1		CLP-1 0.53(mm)
ICV 240-72952/48		01/23/2013 23:09	1		CLP-2 0.53(mm)
ICV 240-72952/49		01/23/2013 23:25	1		CLP-1 0.53(mm)
ICV 240-72952/49		01/23/2013 23:25	1		CLP-2 0.53(mm)
ICV 240-72952/50		01/23/2013 23:41	1	P4000050.D	CLP-1 0.53(mm)
ICV 240-72952/50		01/23/2013 23:41	1		CLP-2 0.53(mm)
ICV 240-72952/51		01/23/2013 23:56	1		CLP-1 0.53(mm)
ICV 240-72952/51		01/23/2013 23:56	1		CLP-2 0.53(mm)
ICV 240-72952/52		01/24/2013 00:12	1		CLP-1 0.53(mm)
ICV 240-72952/52		01/24/2013 00:12	1		CLP-2 0.53(mm)

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 11:22 Calibration End Date: 01/23/2013 12:41 Calibration ID: 13439

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/3	P4000003.D
Level 2	STD01 240-72952/4	P4000004.D
Level 3	STD02 240-72952/5	P4000005.D
Level 4	STD05 240-72952/6	P4000006.D
Level 5	STD1 240-72952/7	P4000007.D
Level 6	STD2 240-72952/8	P4000008.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1232 Peak 1	32065660 24948908	30645070 23128947	27667980	25209338	Ave		27277650.5				13.0		20.0			
PCB-1232 Peak 2	22623160 17586674	21538000 16403855	19857595	17955790	Ave		19327512.3				13.0		20.0			
PCB-1232 Peak 3	41848140 37770006	42479720 36621521	39538965	37045612	Ave		39217327.3				6.4		20.0			
PCB-1232 Peak 4	18045380 16450603	19066290 15768304	17822395	16468966	Ave		17270322.9				7.2		20.0			
PCB-1232 Peak 5	17932220 15006816	17400630 14243768	16435885	15168912	Ave		16031371.8				9.1		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 11:22 Calibration End Date: 01/23/2013 12:41 Calibration ID: 13439

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/3	P4000003.D
Level 2	STD01 240-72952/4	P4000004.D
Level 3	STD02 240-72952/5	P4000005.D
Level 4	STD05 240-72952/6	P4000006.D
Level 5	STD1 240-72952/7	P4000007.D
Level 6	STD2 240-72952/8	P4000008.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1232 Peak 1	1.536	1.537	1.537	1.537	1.537	1.536					1.436 - 1.636	1.537
PCB-1232 Peak 2	1.818	1.818	1.818	1.819	1.819	1.819					1.718 - 1.918	1.819
PCB-1232 Peak 3	2.211	2.209	2.209	2.210	2.210	2.210					2.111 - 2.311	2.210
PCB-1232 Peak 4	2.329	2.330	2.330	2.330	2.329	2.330					2.229 - 2.429	2.330
PCB-1232 Peak 5	2.707	2.707	2.708	2.708	2.709	2.708					2.607 - 2.807	2.708

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 11:22 Calibration End Date: 01/23/2013 12:41 Calibration ID: 13439

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/3	P4000003.D
Level 2	STD01 240-72952/4	P4000004.D
Level 3	STD02 240-72952/5	P4000005.D
Level 4	STD05 240-72952/6	P4000006.D
Level 5	STD1 240-72952/7	P4000007.D
Level 6	STD2 240-72952/8	P4000008.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	Ave	1603283 46257894	3064507	5533596	12604669	24948908	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 2	Ave	1131158 32807709	2153800	3971519	8977895	17586674	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 3	Ave	2092407 73243042	4247972	7907793	18522806	37770006	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 4	Ave	902269 31536607	1906629	3564479	8234483	16450603	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1232 Peak 5	Ave	896611 28487535	1740063	3287177	7584456	15006816	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-22510-1 | Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 | GC Column: CLP-1 | ID: 0.53(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 12:56 | Calibration End Date: 01/23/2013 14:15 | Calibration ID: 13445

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/9	P4000009.D
Level 2	STD01 240-72952/10	P4000010.D
Level 3	STD02 240-72952/11	P4000011.D
Level 4	STD05 240-72952/12	P4000012.D
Level 5	STD1 240-72952/13	P4000013.D
Level 6	STD2 240-72952/14	P4000014.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1242 Peak 1	24114020 17665942	21565690 16863549	20800510	18385568	Ave		19899213.2				14.0		20.0			
PCB-1242 Peak 2	44212800 33555792	40882910 31955396	39024650	34931252	Ave		37427133.3				13.0		20.0			
PCB-1242 Peak 3	83343140 71123082	77763490 70155579	75649820	70919246	Ave		74825726.1				6.9		20.0			
PCB-1242 Peak 4	38230800 30680366	35493740 30304765	34698505	31522882	Ave		33488509.7				9.4		20.0			
PCB-1242 Peak 5	38192460 30752600	35933140 30298035	35022800	31202694	Ave		33566954.8				9.7		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 12:56 Calibration End Date: 01/23/2013 14:15 Calibration ID: 13445

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/9	P4000009.D
Level 2	STD01 240-72952/10	P4000010.D
Level 3	STD02 240-72952/11	P4000011.D
Level 4	STD05 240-72952/12	P4000012.D
Level 5	STD1 240-72952/13	P4000013.D
Level 6	STD2 240-72952/14	P4000014.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1242 Peak 1	1.537	1.537	1.538	1.537	1.537	1.537					1.437 - 1.637	1.537
PCB-1242 Peak 2	1.818	1.818	1.818	1.819	1.819	1.818					1.718 - 1.918	1.818
PCB-1242 Peak 3	2.209	2.210	2.210	2.210	2.210	2.210					2.109 - 2.309	2.210
PCB-1242 Peak 4	2.330	2.330	2.330	2.330	2.330	2.330					2.230 - 2.430	2.330
PCB-1242 Peak 5	2.708	2.708	2.708	2.709	2.709	2.709					2.608 - 2.808	2.709

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 12:56 Calibration End Date: 01/23/2013 14:15 Calibration ID: 13445

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/9	P4000009.D
Level 2	STD01 240-72952/10	P4000010.D
Level 3	STD02 240-72952/11	P4000011.D
Level 4	STD05 240-72952/12	P4000012.D
Level 5	STD1 240-72952/13	P4000013.D
Level 6	STD2 240-72952/14	P4000014.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	Ave	1205701 33727098	2156569	4160102	9192784	17665942	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 2	Ave	2210640 63910792	4088291	7804930	17465626	33555792	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 3	Ave	4167157 140311157	7776349	15129964	35459623	71123082	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 4	Ave	1911540 60609530	3549374	6939701	15761441	30680366	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1242 Peak 5	Ave	1909623 60596069	3593314	7004560	15601347	30752600	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 14:31 Calibration End Date: 01/23/2013 15:49 Calibration ID: 13415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/15	P4000015.D
Level 2	STD01 240-72952/16	P4000016.D
Level 3	STD02 240-72952/17	P4000017.D
Level 4	STD05 240-72952/18	P4000018.D
Level 5	STD1 240-72952/19	P4000019.D
Level 6	STD2 240-72952/20	P4000020.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1248 Peak 1	21539540 16008992	20150460 15178221	19257310	17040612	Ave		18195855.8				14.0		20.0			
PCB-1248 Peak 2	47664700 44293622	51148610 43352498	49438145	45123284	Ave		46836809.8				6.6		20.0			
PCB-1248 Peak 3	59500940 48711533	57759380 47318919	54018730	49061516	Ave		52728503.0				9.7		20.0			
PCB-1248 Peak 4	28918080 25766846	27571130 25947849	26925270	25150354	Ave		26713254.8				5.2		20.0			
PCB-1248 Peak 5	26254900 23456362	25813240 22986847	25720340	23624026	Ave		24642619.2				5.8		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 14:31 Calibration End Date: 01/23/2013 15:49 Calibration ID: 13415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/15	P4000015.D
Level 2	STD01 240-72952/16	P4000016.D
Level 3	STD02 240-72952/17	P4000017.D
Level 4	STD05 240-72952/18	P4000018.D
Level 5	STD1 240-72952/19	P4000019.D
Level 6	STD2 240-72952/20	P4000020.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1248 Peak 1	1.818	1.817	1.818	1.818	1.818	1.817					1.718 - 1.918	1.818
PCB-1248 Peak 2	2.207	2.208	2.208	2.209	2.208	2.207					2.107 - 2.307	2.208
PCB-1248 Peak 3	2.708	2.709	2.708	2.709	2.708	2.709					2.608 - 2.808	2.709
PCB-1248 Peak 4	3.286	3.286	3.286	3.286	3.286	3.286					3.186 - 3.386	3.286
PCB-1248 Peak 5	3.719	3.719	3.719	3.719	3.719	3.720					3.619 - 3.819	3.719

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 14:31 Calibration End Date: 01/23/2013 15:49 Calibration ID: 13415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/15	P4000015.D
Level 2	STD01 240-72952/16	P4000016.D
Level 3	STD02 240-72952/17	P4000017.D
Level 4	STD05 240-72952/18	P4000018.D
Level 5	STD1 240-72952/19	P4000019.D
Level 6	STD2 240-72952/20	P4000020.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	Ave	1076977 30356442	2015046	3851462	8520306	16008992	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 2	Ave	2383235 86704995	5114861	9887629	22561642	44293622	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 3	Ave	2975047 94637838	5775938	10803746	24530758	48711533	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 4	Ave	1445904 51895698	2757113	5385054	12575177	25766846	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1248 Peak 5	Ave	1312745 45973694	2581324	5144068	11812013	23456362	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:

Ave = Average

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: A2HP4 Start Date: 01/23/2013 11:22

Analysis Batch Number: 72952 End Date: 01/24/2013 00:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD005 240-72952/3 IC	A_5-1232	01/23/2013 11:22	1	P4000003.D	CLP-1 0.53(mm)
STD005 240-72952/3 IC		01/23/2013 11:22	1		CLP-2 0.53(mm)
STD01 240-72952/4 IC		01/23/2013 11:38	1	P4000004.D	CLP-1 0.53(mm)
STD01 240-72952/4 IC		01/23/2013 11:38	1		CLP-2 0.53(mm)
STD02 240-72952/5 IC		01/23/2013 11:54	1	P4000005.D	CLP-1 0.53(mm)
STD02 240-72952/5 IC		01/23/2013 11:54	1		CLP-2 0.53(mm)
STD05 240-72952/6 IC		01/23/2013 12:09	1	P4000006.D	CLP-1 0.53(mm)
STD05 240-72952/6 IC		01/23/2013 12:09	1		CLP-2 0.53(mm)
STD1 240-72952/7 IC		01/23/2013 12:25	1	P4000007.D	CLP-1 0.53(mm)
STD1 240-72952/7 IC		01/23/2013 12:25	1		CLP-2 0.53(mm)
STD2 240-72952/8 IC		01/23/2013 12:41	1	P4000008.D	CLP-1 0.53(mm)
STD2 240-72952/8 IC		01/23/2013 12:41	1		CLP-2 0.53(mm)
STD005 240-72952/9 IC	A_5-1242	01/23/2013 12:56	1	P4000009.D	CLP-1 0.53(mm)
STD005 240-72952/9 IC		01/23/2013 12:56	1		CLP-2 0.53(mm)
STD01 240-72952/10 IC		01/23/2013 13:12	1	P4000010.D	CLP-1 0.53(mm)
STD01 240-72952/10 IC		01/23/2013 13:12	1		CLP-2 0.53(mm)
STD02 240-72952/11 IC		01/23/2013 13:28	1	P4000011.D	CLP-1 0.53(mm)
STD02 240-72952/11 IC		01/23/2013 13:28	1		CLP-2 0.53(mm)
STD05 240-72952/12 IC		01/23/2013 13:43	1	P4000012.D	CLP-1 0.53(mm)
STD05 240-72952/12 IC		01/23/2013 13:43	1		CLP-2 0.53(mm)
STD1 240-72952/13 IC		01/23/2013 13:59	1	P4000013.D	CLP-1 0.53(mm)
STD1 240-72952/13 IC		01/23/2013 13:59	1		CLP-2 0.53(mm)
STD2 240-72952/14 IC		01/23/2013 14:15	1	P4000014.D	CLP-1 0.53(mm)
STD2 240-72952/14 IC		01/23/2013 14:15	1		CLP-2 0.53(mm)
STD005 240-72952/15 IC	A_5-1248	01/23/2013 14:31	1	P4000015.D	CLP-1 0.53(mm)
STD005 240-72952/15 IC		01/23/2013 14:31	1		CLP-2 0.53(mm)
STD01 240-72952/16 IC		01/23/2013 14:46	1	P4000016.D	CLP-1 0.53(mm)
STD01 240-72952/16 IC		01/23/2013 14:46	1		CLP-2 0.53(mm)
STD02 240-72952/17 IC		01/23/2013 15:02	1	P4000017.D	CLP-1 0.53(mm)
STD02 240-72952/17 IC		01/23/2013 15:02	1		CLP-2 0.53(mm)
STD05 240-72952/18 IC		01/23/2013 15:18	1	P4000018.D	CLP-1 0.53(mm)
STD05 240-72952/18 IC		01/23/2013 15:18	1		CLP-2 0.53(mm)
STD1 240-72952/19 IC		01/23/2013 15:33	1	P4000019.D	CLP-1 0.53(mm)
STD1 240-72952/19 IC		01/23/2013 15:33	1		CLP-2 0.53(mm)
STD2 240-72952/20 IC		01/23/2013 15:49	1	P4000020.D	CLP-1 0.53(mm)
STD2 240-72952/20 IC		01/23/2013 15:49	1		CLP-2 0.53(mm)
STD005 240-72952/21 IC	1221/1254	01/23/2013 16:05	1	P4000021.D	CLP-1 0.53(mm)

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FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 16:05 Calibration End Date: 01/23/2013 17:23 Calibration ID: 13421

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/21	P4000021.D
Level 2	STD01 240-72952/22	P4000022.D
Level 3	STD02 240-72952/23	P4000023.D
Level 4	STD05 240-72952/24	P4000024.D
Level 5	STD1 240-72952/25	P4000025.D
Level 6	STD2 240-72952/26	P4000026.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1221 Peak 1	15671580 12432699	14394860 12058051	14397315	12911706	Ave		13644368.5				10.0		20.0			
PCB-1221 Peak 2	9233080 6736724	8824060 6636306	7982425	7305936	Ave		7786421.75				14.0		20.0			
PCB-1221 Peak 3	39365080 30560336	35781520 29174951	33955780	31818840	Ave		33442751.1				11.0		20.0			
PCB-1254 Peak 1	84849160 74545543	77896850 74068205	77109535	75769764	Ave		77373176.2				5.1		20.0			
PCB-1254 Peak 2	89308360 76045301	84915550 76559185	82239440	76616530	Ave		80947394.3				6.8		20.0			
PCB-1254 Peak 3	56960980 59368622	57019530 60005903	56616820	58398556	Ave		58061735.3				2.4		20.0			
PCB-1254 Peak 4	59759120 51014165	54477020 51162280	52182860	51748440	Ave		53390647.4				6.3		20.0			
PCB-1254 Peak 5	86425360 76226492	78136180 77626004	76148645	76236504	Ave		78466530.8				5.1		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 16:05 Calibration End Date: 01/23/2013 17:23 Calibration ID: 13421

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/21	P4000021.D
Level 2	STD01 240-72952/22	P4000022.D
Level 3	STD02 240-72952/23	P4000023.D
Level 4	STD05 240-72952/24	P4000024.D
Level 5	STD1 240-72952/25	P4000025.D
Level 6	STD2 240-72952/26	P4000026.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1221 Peak 1	1.400	1.399	1.399	1.399	1.399	1.399					1.300 - 1.500	1.399
PCB-1221 Peak 2	1.508	1.507	1.508	1.508	1.507	1.507					1.408 - 1.608	1.508
PCB-1221 Peak 3	1.537	1.537	1.537	1.538	1.537	1.537					1.437 - 1.637	1.537
PCB-1254 Peak 1	3.334	3.333	3.333	3.333	3.332	3.333					3.234 - 3.434	3.333
PCB-1254 Peak 2	3.720	3.718	3.719	3.719	3.719	3.718					3.620 - 3.820	3.719
PCB-1254 Peak 3	4.002	4.002	4.002	4.002	4.002	4.002					3.902 - 4.102	4.002
PCB-1254 Peak 4	4.193	4.192	4.193	4.192	4.192	4.192					4.093 - 4.293	4.192
PCB-1254 Peak 5	4.476	4.475	4.475	4.475	4.476	4.476					4.376 - 4.576	4.476

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 16:05 Calibration End Date: 01/23/2013 17:23 Calibration ID: 13421

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/21	P4000021.D
Level 2	STD01 240-72952/22	P4000022.D
Level 3	STD02 240-72952/23	P4000023.D
Level 4	STD05 240-72952/24	P4000024.D
Level 5	STD1 240-72952/25	P4000025.D
Level 6	STD2 240-72952/26	P4000026.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	Ave	783579 24116102	1439486	2879463	6455853	12432699	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1221 Peak 2	Ave	461654 13272611	882406	1596485	3652968	6736724	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1221 Peak 3	Ave	1968254 58349901	3578152	6791156	15909420	30560336	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 1	Ave	4242458 148136410	7789685	15421907	37884882	74545543	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 2	Ave	4465418 153118369	8491555	16447888	38308265	76045301	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 3	Ave	2848049 120011807	5701953	11323364	29199278	59368622	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 4	Ave	2987956 102324559	5447702	10436572	25874220	51014165	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1254 Peak 5	Ave	4321268 155252007	7813618	15229729	38118252	76226492	0.0500 2.00	0.100	0.200	0.500	1.00

Curve Type Legend:
Ave = Average

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 17:39 Calibration End Date: 01/23/2013 18:58 Calibration ID: 13427

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/27	P4000027.D
Level 2	STD01 240-72952/28	P4000028.D
Level 3	STD02 240-72952/29	P4000029.D
Level 4	STD05 240-72952/30	P4000030.D
Level 5	STD1 240-72952/31	P4000031.D
Level 6	STD2 240-72952/32	P4000032.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
PCB-1016 Peak 1	30338840 22763051	26770610 21159418	24884225	23512384	Ave		24904754.6				13.0		20.0			
PCB-1016 Peak 2	54488700 41873472	48678190 38773254	45465140	43490016	Ave		45461461.9				12.0		20.0			
PCB-1016 Peak 3	100913920 89309171	93434850 85587206	89746580	89968490	Ave		91493369.5				5.7		20.0			
PCB-1016 Peak 4	46621260 39203590	42856090 36931699	40509565	39419012	Ave		40923536.0				8.3		20.0			
PCB-1016 Peak 5	46737860 39308284	43602380 37258146	41198490	39692852	Ave		41299668.7				8.2		20.0			
PCB-1260 Peak 1	67486340 57684671	62595790 55385528	59783325	58122966	Ave		60176436.7				7.2		20.0			
PCB-1260 Peak 2	119412860 103941899	111074050 99528178	106587420	104439676	Ave		107497347				6.5		20.0			
PCB-1260 Peak 3	116215740 105582253	108757630 102206743	106262580	104997792	Ave		107337123				4.5		20.0			
PCB-1260 Peak 4	126114980 122952733	120662100 119539431	120901215	121229960	Ave		121900070				1.9		20.0			
PCB-1260 Peak 5	64487360 61431693	62224570 59935222	61141395	60222176	Ave		61573736.1				2.7		20.0			
Tetrachloro-m-xylene	1618459200 1449045480	1458974200 1362467390	1441350300	1442071440	Ave		1462061335				5.8		20.0			
DCB Decachlorobiphenyl	1417926800 1247227280	1307133600 1188265260	1303955300	1238364640	Ave		1283812147				6.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 17:39 Calibration End Date: 01/23/2013 18:58 Calibration ID: 13427

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/27	P4000027.D
Level 2	STD01 240-72952/28	P4000028.D
Level 3	STD02 240-72952/29	P4000029.D
Level 4	STD05 240-72952/30	P4000030.D
Level 5	STD1 240-72952/31	P4000031.D
Level 6	STD2 240-72952/32	P4000032.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
PCB-1016 Peak 1	1.538	1.538	1.539	1.538	1.538	1.538					1.438 - 1.638	1.538
PCB-1016 Peak 2	1.819	1.819	1.820	1.819	1.819	1.819					1.719 - 1.919	1.819
PCB-1016 Peak 3	2.211	2.210	2.211	2.210	2.210	2.211					2.110 - 2.310	2.211
PCB-1016 Peak 4	2.331	2.331	2.331	2.330	2.330	2.330					2.230 - 2.430	2.331
PCB-1016 Peak 5	2.708	2.710	2.710	2.709	2.709	2.708					2.609 - 2.809	2.709
PCB-1260 Peak 1	3.908	3.908	3.908	3.908	3.908	3.907					3.808 - 4.008	3.908
PCB-1260 Peak 2	4.194	4.195	4.195	4.195	4.195	4.194					4.095 - 4.295	4.195
PCB-1260 Peak 3	4.474	4.475	4.475	4.475	4.475	4.474					4.375 - 4.575	4.475
PCB-1260 Peak 4	5.176	5.175	5.176	5.176	5.176	5.175					5.076 - 5.276	5.176
PCB-1260 Peak 5	5.460	5.460	5.460	5.459	5.460	5.459					5.359 - 5.559	5.460
Tetrachloro-m-xylene	1.269	1.269	1.270	1.269	1.270	1.269					1.169 - 1.369	1.269
DCB Decachlorobiphenyl	6.617	6.618	6.617	6.616	6.616	6.617					6.516 - 6.716	6.617

FORM VI
PCBS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72952

SDG No.:

Instrument ID: A2HP4 GC Column: CLP-1 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/23/2013 17:39 Calibration End Date: 01/23/2013 18:58 Calibration ID: 13427

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 240-72952/27	P4000027.D
Level 2	STD01 240-72952/28	P4000028.D
Level 3	STD02 240-72952/29	P4000029.D
Level 4	STD05 240-72952/30	P4000030.D
Level 5	STD1 240-72952/31	P4000031.D
Level 6	STD2 240-72952/32	P4000032.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	Ave	1516942 42318835	2677061	4976845	11756192	22763051	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 2	Ave	2724435 77546507	4867819	9093028	21745008	41873472	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 3	Ave	5045696 171174412	9343485	17949316	44984245	89309171	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 4	Ave	2331063 73863398	4285609	8101913	19709506	39203590	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1016 Peak 5	Ave	2336893 74516292	4360238	8239698	19846426	39308284	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 1	Ave	3374317 110771056	6259579	11956665	29061483	57684671	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 2	Ave	5970643 199056355	11107405	21317484	52219838	103941899	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 3	Ave	5810787 204413485	10875763	21252516	52498896	105582253	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 4	Ave	6305749 239078863	12066210	24180243	60614980	122952733	0.0500 2.00	0.100	0.200	0.500	1.00
PCB-1260 Peak 5	Ave	3224368 119870445	6222457	12228279	30111088	61431693	0.0500 2.00	0.100	0.200	0.500	1.00
Tetrachloro-m-xylene	Ave	4046148 136246739	7294871	14413503	36051786	72452274	0.00250 0.100	0.00500	0.0100	0.0250	0.0500
DCB Decachlorobiphenyl	Ave	3544817 118826526	6535668	13039553	30959116	62361364	0.00250 0.100	0.00500	0.0100	0.0250	0.0500

Curve Type Legend:
Ave = Average

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-72952/50 Calibration Date: 01/23/2013 23:41

Instrument ID: A2HP4 Calib Start Date: 01/23/2013 17:39

GC Column: CLP-1 ID: 0.53(mm) Calib End Date: 01/23/2013 18:58

Lab File ID: P4000050.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	24904755	22145890		0.889	1.00	-11.1	20.0
PCB-1016 Peak 2	Ave	45461462	45311515		0.997	1.00	-0.3	20.0
PCB-1016 Peak 3	Ave	91493370	96638979		1.06	1.00	5.6	20.0
PCB-1016 Peak 4	Ave	40923536	42443080		1.04	1.00	3.7	20.0
PCB-1016 Peak 5	Ave	41299669	41470882		1.00	1.00	0.4	20.0
PCB-1260 Peak 1	Ave	60176437	58370853		0.970	1.00	-3.0	20.0
PCB-1260 Peak 2	Ave	107497347	105036319		0.977	1.00	-2.3	20.0
PCB-1260 Peak 3	Ave	107337123	98726268		0.920	1.00	-8.0	20.0
PCB-1260 Peak 4	Ave	121900070	146566793		1.20	1.00	20.2*	20.0
PCB-1260 Peak 5	Ave	61573736	68433662		1.11	1.00	11.1	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-72952/50 Calibration Date: 01/23/2013 23:41

Instrument ID: A2HP4 Calib Start Date: 01/23/2013 17:39

GC Column: CLP-1 ID: 0.53(mm) Calib End Date: 01/23/2013 18:58

Lab File ID: P4000050.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	1.54	1.44	1.64
PCB-1016 Peak 2	1.82	1.72	1.92
PCB-1016 Peak 3	2.21	2.11	2.31
PCB-1016 Peak 4	2.33	2.23	2.43
PCB-1016 Peak 5	2.71	2.61	2.81
PCB-1260 Peak 1	3.91	3.81	4.01
PCB-1260 Peak 2	4.20	4.10	4.30
PCB-1260 Peak 3	4.47	4.38	4.58
PCB-1260 Peak 4	5.18	5.08	5.28
PCB-1260 Peak 5	5.46	5.36	5.56

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: A2HP4 Start Date: 04/03/2013 15:07

Analysis Batch Number: 80466 End Date: 04/03/2013 18:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 240-80466/3 CCVRT		04/03/2013 15:07	1	P4000003.D	CLP-1 0.53(mm)
CCV 240-80466/3 CCVRT		04/03/2013 15:07	1		CLP-2 0.53(mm)
ZZZZZ		04/03/2013 16:57	1		CLP-1 0.53(mm)
ZZZZZ		04/03/2013 16:57	1		CLP-2 0.53(mm)
240-22510-6	MRC-MW103A-032713	04/03/2013 17:13	1	P4000011.D	CLP-1 0.53(mm)
ZZZZZ		04/03/2013 17:13	1		CLP-2 0.53(mm)
240-22510-7	MRC-MW103B-032713	04/03/2013 17:29	1	P4000012.D	CLP-1 0.53(mm)
ZZZZZ		04/03/2013 17:29	1		CLP-2 0.53(mm)
ZZZZZ		04/03/2013 17:44	1		CLP-1 0.53(mm)
ZZZZZ		04/03/2013 17:44	1		CLP-2 0.53(mm)
MB 240-80231/5-A		04/03/2013 18:00	1	P4000014.D	CLP-1 0.53(mm)
ZZZZZ		04/03/2013 18:00	1		CLP-2 0.53(mm)
LCS 240-80231/6-A		04/03/2013 18:16	1	P4000015.D	CLP-1 0.53(mm)
ZZZZZ		04/03/2013 18:16	1		CLP-2 0.53(mm)
CCV 240-80466/16		04/03/2013 18:32	1	P4000016.D	CLP-1 0.53(mm)
CCV 240-80466/16		04/03/2013 18:32	1		CLP-2 0.53(mm)

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCV 240-80466/3 Calibration Date: 04/03/2013 15:07

Instrument ID: A2HP4 Calib Start Date: 01/23/2013 17:39

GC Column: CLP-1 ID: 0.53(mm) Calib End Date: 01/23/2013 18:58

Lab File ID: P4000003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	24904755	24971666		0.501	0.500	0.3	15.0
PCB-1016 Peak 2	Ave	45461462	44493974		0.489	0.500	-2.1	15.0
PCB-1016 Peak 3	Ave	91493370	93614036		0.512	0.500	2.3	15.0
PCB-1016 Peak 4	Ave	40923536	40093174		0.490	0.500	-2.0	15.0
PCB-1016 Peak 5	Ave	41299669	40038686		0.485	0.500	-3.1	15.0
PCB-1260 Peak 1	Ave	60176437	59603092		0.495	0.500	-1.0	15.0
PCB-1260 Peak 2	Ave	107497347	107562318		0.500	0.500	0.0	15.0
PCB-1260 Peak 3	Ave	107337123	108813044		0.507	0.500	1.4	15.0
PCB-1260 Peak 4	Ave	121900070	129481416		0.531	0.500	6.2	15.0
PCB-1260 Peak 5	Ave	61573736	63797080		0.518	0.500	3.6	15.0
Tetrachloro-m-xylene	Ave	1462061335	1487786560		0.0254	0.0250	1.8	15.0
DCB Decachlorobipheny1	Ave	1283812147	1288728600		0.0251	0.0250	0.4	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCV 240-80466/3 Calibration Date: 04/03/2013 15:07

Instrument ID: A2HP4 Calib Start Date: 01/23/2013 17:39

GC Column: CLP-1 ID: 0.53(mm) Calib End Date: 01/23/2013 18:58

Lab File ID: P4000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	1.54	1.44	1.64
PCB-1016 Peak 2	1.82	1.72	1.92
PCB-1016 Peak 3	2.21	2.11	2.31
PCB-1016 Peak 4	2.33	2.23	2.43
PCB-1016 Peak 5	2.70	2.60	2.80
PCB-1260 Peak 1	3.90	3.80	4.00
PCB-1260 Peak 2	4.19	4.09	4.29
PCB-1260 Peak 3	4.47	4.37	4.57
PCB-1260 Peak 4	5.17	5.07	5.27
PCB-1260 Peak 5	5.45	5.35	5.55
Tetrachloro-m-xylene	1.27	1.17	1.37
DCB Decachlorobiphenyl	6.60	6.50	6.70

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCV 240-80466/16 Calibration Date: 04/03/2013 18:32

Instrument ID: A2HP4 Calib Start Date: 01/23/2013 17:39

GC Column: CLP-1 ID: 0.53(mm) Calib End Date: 01/23/2013 18:58

Lab File ID: P4000016.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Ave	24904755	24356680		0.489	0.500	-2.2	15.0
PCB-1016 Peak 2	Ave	45461462	43438762		0.478	0.500	-4.4	15.0
PCB-1016 Peak 3	Ave	91493370	91654220		0.501	0.500	0.2	15.0
PCB-1016 Peak 4	Ave	40923536	40033478		0.489	0.500	-2.2	15.0
PCB-1016 Peak 5	Ave	41299669	39559978		0.479	0.500	-4.2	15.0
PCB-1260 Peak 1	Ave	60176437	58295028		0.484	0.500	-3.1	15.0
PCB-1260 Peak 2	Ave	107497347	105379116		0.490	0.500	-2.0	15.0
PCB-1260 Peak 3	Ave	107337123	106676584		0.497	0.500	-0.6	15.0
PCB-1260 Peak 4	Ave	121900070	126982744		0.521	0.500	4.2	15.0
PCB-1260 Peak 5	Ave	61573736	62289202		0.506	0.500	1.2	15.0
Tetrachloro-m-xylene	Ave	1462061335	1440625360		0.0246	0.0250	-1.5	15.0
DCB Decachlorobiphenyl	Ave	1283812147	1280962320		0.0249	0.0250	-0.2	15.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCV 240-80466/16 Calibration Date: 04/03/2013 18:32

Instrument ID: A2HP4 Calib Start Date: 01/23/2013 17:39

GC Column: CLP-1 ID: 0.53(mm) Calib End Date: 01/23/2013 18:58

Lab File ID: P4000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	1.54	1.44	1.64
PCB-1016 Peak 2	1.82	1.72	1.92
PCB-1016 Peak 3	2.21	2.11	2.31
PCB-1016 Peak 4	2.33	2.23	2.43
PCB-1016 Peak 5	2.71	2.61	2.81
PCB-1260 Peak 1	3.90	3.80	4.00
PCB-1260 Peak 2	4.19	4.09	4.29
PCB-1260 Peak 3	4.47	4.37	4.57
PCB-1260 Peak 4	5.17	5.07	5.27
PCB-1260 Peak 5	5.45	5.35	5.55
Tetrachloro-m-xylene	1.27	1.17	1.37
DCB Decachlorobiphenyl	6.61	6.51	6.71

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: MB 240-80231/5-A

Matrix: Water Date Extracted: 04/02/2013 09:46

Lab File ID:(1) Lab File ID:(2) P4000014.D

Date Analyzed:(1) Date Analyzed:(2) 04/03/2013 18:00

Instrument ID:(1) Instrument ID:(2) A2HP4

GC Column:(1) ID: GC Column:(2) CLP-1 ID: 0.53(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MRC-MW103A-032713	240-22510-6		04/03/2013 17:13
MRC-MW103B-032713	240-22510-7		04/03/2013 17:29
	LCS 240-80231/6-A		04/03/2013 18:16

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80231/5-A

Matrix: Water Lab File ID: P4000014.D

Analysis Method: 8082 Date Collected:

Extraction Method: 3520C Date Extracted: 04/02/2013 09:46

Sample wt/vol: 1000(mL) Date Analyzed: 04/03/2013 18:00

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: CLP-1 ID: 0.53(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 80466 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
12674-11-2	Aroclor 1016	1.0	U	1.0	0.17
11104-28-2	Aroclor 1221	1.0	U	1.0	0.13
11141-16-5	Aroclor 1232	1.0	U	1.0	0.16
53469-21-9	Aroclor 1242	1.0	U	1.0	0.22
12672-29-6	Aroclor 1248	1.0	U	1.0	0.10
11097-69-1	Aroclor 1254	1.0	U	1.0	0.16
11096-82-5	Aroclor 1260	1.0	U	1.0	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	67		23-136
2051-24-3	DCB Decachlorobiphenyl	62		10-130

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P4000015.D

Lab ID: LCS 240-80231/6-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Aroclor 1016	5.00	3.82	76	66-120	
Aroclor 1260	5.00	4.15	83	55-120	

Column to be used to flag recovery and RPD values

FORM III 8082

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low

GC Column (2): CLP-1 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	TCX2 #	DCB2 #
MRC-MW103A-032713	240-22510-6	63	66
MRC-MW103B-032713	240-22510-7	63	49
	MB 240-80231/5-A	67	62
	LCS 240-80231/6-A	67	69

	QC LIMITS
TCX = Tetrachloro-m-xylene	23-136
DCB = DCB Decachlorobiphenyl	10-130

Column to be used to flag recovery values

FORM II 8082

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Perchlorate by LC/MS or LC/MS/MS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Instrument ID: A5 Start Date: 04/02/2013 15:41

Analysis Batch Number: 13496 End Date: 04/03/2013 13:09

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/02/2013 15:41	1		Anion HR 4.6(mm)
ICB 320-13496/2		04/02/2013 15:58	1	02APR13-perc-004.d	Anion HR 4.6(mm)
STD01 320-13496/3 IC		04/02/2013 16:14	1	02APR13-perc-005.d	Anion HR 4.6(mm)
STD02 320-13496/4 IC		04/02/2013 16:31	1	02APR13-perc-006.d	Anion HR 4.6(mm)
STD03 320-13496/5 IC		04/02/2013 16:47	1	02APR13-perc-007.d	Anion HR 4.6(mm)
STD04 320-13496/6 ICISAV		04/02/2013 17:04	1	02APR13-perc-008.d	Anion HR 4.6(mm)
STD05 320-13496/7 IC		04/02/2013 17:20	1	02APR13-perc-009.d	Anion HR 4.6(mm)
STD06 320-13496/8 IC		04/02/2013 17:37	1	02APR13-perc-010.d	Anion HR 4.6(mm)
STD07 320-13496/9 IC		04/02/2013 17:53	1	02APR13-perc-011.d	Anion HR 4.6(mm)
STD08 320-13496/10 IC		04/02/2013 18:10	1	02APR13-perc-012.d	Anion HR 4.6(mm)
CCB 320-13496/11		04/02/2013 18:26	1	02APR13-perc-013.d	Anion HR 4.6(mm)
ICV 320-13496/12		04/02/2013 18:43	1	02APR13-perc-014.d	Anion HR 4.6(mm)
CCB 320-13496/62		04/03/2013 08:28	1	02APR13-perc-064.d	Anion HR 4.6(mm)
CCVL 320-13496/63		04/03/2013 08:45	1	02APR13-perc-065.d	Anion HR 4.6(mm)
MB 320-13458/1-A		04/03/2013 09:01	1	02APR13-perc-066.d	Anion HR 4.6(mm)
LCS 320-13458/2-A		04/03/2013 09:18	1	02APR13-perc-067.d	Anion HR 4.6(mm)
INF 320-13458/3-A		04/03/2013 09:34	1	02APR13-perc-068.d	Anion HR 4.6(mm)
ZZZZZ		04/03/2013 09:51	1		Anion HR 4.6(mm)
240-22303-D-4-B MS		04/03/2013 10:07	1	02APR13-perc-070.d	Anion HR 4.6(mm)
240-22303-D-4-C MSD		04/03/2013 10:24	1	02APR13-perc-071.d	Anion HR 4.6(mm)
ZZZZZ		04/03/2013 10:40	1		Anion HR 4.6(mm)
ZZZZZ		04/03/2013 10:57	1		Anion HR 4.6(mm)
ZZZZZ		04/03/2013 11:13	1		Anion HR 4.6(mm)
ZZZZZ		04/03/2013 11:30	1		Anion HR 4.6(mm)
ZZZZZ		04/03/2013 11:46	1		Anion HR 4.6(mm)
240-22510-8	MRC-MW-96A-032713	04/03/2013 12:03	1	02APR13-perc-077.d	Anion HR 4.6(mm)
240-22510-9	MRC-MW-96B-032713	04/03/2013 12:19	1	02APR13-perc-078.d	Anion HR 4.6(mm)
CCVL 320-13496/77		04/03/2013 12:36	1	02APR13-perc-079.d	Anion HR 4.6(mm)
CCV 320-13496/78		04/03/2013 12:52	1	02APR13-perc-080.d	Anion HR 4.6(mm)
CCB 320-13496/79		04/03/2013 13:09	1	02APR13-perc-081.d	Anion HR 4.6(mm)

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QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2013-04-02 12:49		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.67	0.70	0.10	-0.03	Pass	53210	0	Pass
302.00	302.00	0.10	0.00	Pass	0.67	0.70	0.10	-0.03	Pass	170236	0	Pass
601.99	601.98	0.10	0.01	Pass	0.65	0.70	0.10	-0.05	Pass	997155	0	Pass
1033.96	1033.99	0.10	-0.03	Pass	0.65	0.70	0.10	-0.05	Pass	661791	0	Pass
1333.95	1333.97	0.10	-0.02	Pass	0.66	0.70	0.10	-0.04	Pass	944543	0	Pass
1633.93	1633.95	0.10	-0.02	Pass	0.64	0.70	0.10	-0.06	Pass	595664	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.02	112.99	0.10	0.03	Pass	0.68	0.70	0.10	-0.02	Pass	272909	0	Pass
302.01	302.00	0.10	0.01	Pass	0.67	0.70	0.10	-0.03	Pass	195660	0	Pass
602.00	601.98	0.10	0.02	Pass	0.67	0.70	0.10	-0.03	Pass	513759	0	Pass
1034.02	1033.99	0.10	0.03	Pass	0.66	0.70	0.10	-0.04	Pass	303988	0	Pass
1334.01	1333.97	0.10	0.04	Pass	0.66	0.70	0.10	-0.04	Pass	750619	0	Pass
1633.97	1633.95	0.10	0.02	Pass	0.63	0.70	0.10	-0.07	Pass	591879	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.30	-0.01	Pass	1.17	1.20	0.60	-0.03	Pass	65997	0	Pass
301.88	302.00	0.30	-0.12	Pass	1.34	1.20	0.60	0.14	Pass	280216	0	Pass
601.89	601.98	0.30	-0.09	Pass	1.35	1.20	0.60	0.15	Pass	1580414	0	Pass
1033.91	1033.99	0.30	-0.08	Pass	1.28	1.20	0.60	0.08	Pass	1327805	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.27	1.20	0.60	0.07	Pass	2573837	0	Pass
1633.88	1633.95	0.30	-0.07	Pass	1.21	1.20	0.60	0.01	Pass	2450434	0	Pass

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.19	1.20	0.60	-0.01	Pass	358538	0	Pass
302.01	302.00	0.30	0.01	Pass	1.24	1.20	0.60	0.04	Pass	286426	0	Pass
601.97	601.98	0.30	-0.01	Pass	1.23	1.20	0.60	0.03	Pass	825842	0	Pass
1033.98	1033.99	0.30	-0.01	Pass	1.23	1.20	0.60	0.03	Pass	619539	0	Pass
1333.97	1333.97	0.30	0.00	Pass	1.23	1.20	0.60	0.03	Pass	1448989	0	Pass
1633.98	1633.95	0.30	0.03	Pass	1.22	1.20	0.60	0.02	Pass	1236455	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.96	112.99	0.50	-0.03	Pass	2.49	2.50	1.25	-0.01	Pass	73215	0	Pass
301.85	302.00	0.50	-0.15	Pass	2.68	2.50	1.25	0.18	Pass	345825	0	Pass
601.85	601.98	0.50	-0.13	Pass	2.75	2.50	1.25	0.25	Pass	1811568	0	Pass
1033.87	1033.99	0.50	-0.12	Pass	2.63	2.50	1.25	0.13	Pass	1906517	0	Pass
1333.87	1333.97	0.50	-0.10	Pass	2.61	2.50	1.25	0.11	Pass	3881199	0	Pass
1633.89	1633.95	0.50	-0.06	Pass	2.51	2.50	1.25	0.01	Pass	4087221	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.90	112.99	0.50	-0.09	Pass	2.60	2.50	1.25	0.10	Pass	420522	0	Pass
301.94	302.00	0.50	-0.06	Pass	2.58	2.50	1.25	0.08	Pass	402501	0	Pass
601.93	601.98	0.50	-0.05	Pass	2.57	2.50	1.25	0.07	Pass	1352701	0	Pass
1034.01	1033.99	0.50	0.02	Pass	2.45	2.50	1.25	-0.05	Pass	1267148	0	Pass
1333.96	1333.97	0.50	-0.01	Pass	2.49	2.50	1.25	-0.01	Pass	3035977	0	Pass
1634.04	1633.95	0.50	0.09	Pass	2.45	2.50	1.25	-0.05	Pass	2960512	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.8443 0.7603	0.8106 0.8079	0.7242 0.8387	0.7636	0.7815	Ave		0.7914				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	2273493 67422374	4374681 132085000	6549574 261992582	13545542	27801799	0.150 5.00	0.300 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 320-13496/12 Calibration Date: 04/02/2013 18:43

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.8179		5.17	5.00	3.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVL 320-13496/63 Calibration Date: 04/03/2013 08:45

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-065.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7859		0.496	0.500	-0.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVL 320-13496/77 Calibration Date: 04/03/2013 12:36

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-079.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7690		0.486	0.500	-2.8	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCV 320-13496/78 Calibration Date: 04/03/2013 12:52

Instrument ID: A5 Calib Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/02/2013 18:10

Lab File ID: 02APR13-perc-080.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7914	0.7780		4.92	5.00	-1.7	15.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-13458/1-A

Matrix: Water Lab File ID: 02APR13-perc-066.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) Date Analyzed: 04/03/2013 09:01

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-13496/2

Matrix: Water Lab File ID: 02APR13-perc-004.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/02/2013 15:58

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/11

Matrix: Water Lab File ID: 02APR13-perc-013.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/02/2013 18:26

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/62

Matrix: Water Lab File ID: 02APR13-perc-064.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/03/2013 08:28

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13496/79

Matrix: Water Lab File ID: 02APR13-perc-081.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/03/2013 13:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 80(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Lab File ID: 02APR13-perc-066.d Lab Sample ID: MB 320-13458/1-A

Matrix: Water Date Extracted: 04/02/2013 09:49

Instrument ID: A5 Date Analyzed: 04/03/2013 09:01

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-13458/2-A	02APR13-perc-067.d	04/03/2013 09:18
	240-22303-D-4-B MS	02APR13-perc-070.d	04/03/2013 10:07
	240-22303-D-4-C MSD	02APR13-perc-071.d	04/03/2013 10:24
MRC-MW-96A-032713	240-22510-8	02APR13-perc-077.d	04/03/2013 12:03
MRC-MW-96B-032713	240-22510-9	02APR13-perc-078.d	04/03/2013 12:19

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-067.d

Lab ID: LCS 320-13458/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	5.08	102	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-070.d

Lab ID: 240-22303-D-4-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.50 U	4.74	95	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-071.d

Lab ID: 240-22303-D-4-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	4.80	96	1	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 02APR13-perc-068.d

Lab ID: INF 320-13458/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.82	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/02/2013 16:14

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/02/2013 18:10

Calibration ID: 2501

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		174201778	9.98				
UPPER LIMIT		261302667	10.98				
LOWER LIMIT		87100889	8.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-13496/11		183986481	9.98				
ICV 320-13496/12		178010087	9.98				
CCB 320-13496/62		171394587	9.98				
CCVL 320-13496/63		179384534	10.00				
MB 320-13458/1-A		178957593	9.98				
LCS 320-13458/2-A		157475265	9.98				
INF 320-13458/3-A		160252234	9.91				
240-22303-D-4-B MS		165720309	9.91				
240-22303-D-4-C MSD		184204219	9.93				
240-22510-8	MRC-MW-96A-032713	169620078	9.98				
240-22510-9	MRC-MW-96B-032713	164559370	9.98				
CCVL 320-13496/77		177450415	10.00				
CCV 320-13496/78		178027486	10.00				
CCB 320-13496/79		175726361	10.00				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909		0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392		1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489		1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655		1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512		3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705		3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319		5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657			2.572 - 2.772	2.699

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22510-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Ave	38438	123659	406582	1209668	3969261	0.251	0.965	3.86	11.6	38.6
		11934310	81376315	36666789	159521463		116	772	347	1543	
Ethene	Ave	42640	178527	602389	1803144	6346457	0.440	1.69	6.78	20.3	67.8
		18928943	128474180	57345534	247666290		203	1355	610	2710	
Acetylene	Ave	10063	41670	142717	430060	1642953	0.408	1.57	6.27	18.8	62.7
		5189958	40355973	16648752	77009812		188	1254	564	2508	
Ethane	Ave	47848	203442	696560	2103657	7472670	0.472	1.81	7.26	21.8	72.6
		22508675	153167226	68933291	300072325		218	1452	653	2903	
Propene	Ave	52126	224438	758081	2265818	9132788	0.660	2.54	10.2	30.5	102
		27266136	185584124	82393900	357727706		305	2030	914	4060	
Propane	Ave	63821	279391	964752	2915538	11246033	0.691	2.66	10.6	31.9	106
		34014805	231733482	104277738	454872922		319	2127	957	4253	
Propane, 2-methyl	Ave	76200	333875	1215789	3674766	15084964	0.911	3.50	14.0	42.0	140
		45765053	311308529	140338679	613077945		420	2802	1261	5604	
1,1,1-Trifluoroethane	Ave	2054100	8954283	36585949	121933404	249161727	65.8	253	1013	3038	6076
		367330855		500284541			9114		12152		

Curve Type Legend:
Ave = Average

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: ZPID Start Date: 03/29/2013 11:02

Analysis Batch Number: 79864 End Date: 03/29/2013 15:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-79864/3		03/29/2013 11:02	1	Z0032903.D	
LCS 240-79864/4		03/29/2013 11:15	1	Z0032904.D	
MB 240-79864/5		03/29/2013 11:27	1	Z0032905.D	
ZZZZZ		03/29/2013 11:39	10		
240-22447-F-2 MS		03/29/2013 11:51	10	Z0032907.D	
240-22447-F-2 MSD		03/29/2013 12:04	10	Z0032908.D	
ZZZZZ		03/29/2013 12:16	10		
ZZZZZ		03/29/2013 12:28	10		
ZZZZZ		03/29/2013 12:40	10		
ZZZZZ		03/29/2013 12:52	1		
ZZZZZ		03/29/2013 13:05	1		
ZZZZZ		03/29/2013 13:17	1		
ZZZZZ		03/29/2013 13:29	1		
ZZZZZ		03/29/2013 13:41	1		
ZZZZZ		03/29/2013 13:54	1		
240-22510-2	MRC-MW27A-032713	03/29/2013 14:06	1	Z0032918.D	
ZZZZZ		03/29/2013 14:18	1		
240-22510-5	MRC-MW24A-032713	03/29/2013 14:30	1	Z0032920.D	
ZZZZZ		03/29/2013 14:42	1		
ZZZZZ		03/29/2013 14:55	1		
ZZZZZ		03/29/2013 15:07	1		
ZZZZZ		03/29/2013 15:19	1		
ZZZZZ		03/29/2013 15:31	1		
ZZZZZ		03/29/2013 15:44	1		

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FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVRT 240-79864/3 Calibration Date: 03/29/2013 11:02

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0032903.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	101792		105	116	-9.5	30.0
Ethene	Ave	94091	93098		201	203	-1.1	30.0
Acetylene	Ave	27012	30925		215	188	14.5	30.0
Ethane	Ave	102982	98878		209	218	-4.0	30.0
Propene	Ave	85073	83493		299	305	-1.9	30.0
Propane	Ave	101861	96400		302	319	-5.4	30.0
Propane, 2-methyl	Ave	100175	94603		397	420	-5.6	30.0
1,1,1-Trifluoroethane	Ave	37902	41396		2660	2440	9.2	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVRT 240-79864/3 Calibration Date: 03/29/2013 11:02

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0032903.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.69	1.49	1.89
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: ZPID Start Date: 04/01/2013 15:36

Analysis Batch Number: 80082 End Date: 04/02/2013 00:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-80082/1		04/01/2013 15:36	1	Z0040101.D	
ZZZZZ		04/01/2013 15:48	1		
ZZZZZ		04/01/2013 16:00	1		
ZZZZZ		04/01/2013 16:40	10		
ZZZZZ		04/01/2013 16:52	10		
ZZZZZ		04/01/2013 17:04	10		
ZZZZZ		04/01/2013 17:16	1		
ZZZZZ		04/01/2013 17:29	1		
ZZZZZ		04/01/2013 17:41	1		
ZZZZZ		04/01/2013 17:53	1		
ZZZZZ		04/01/2013 18:05	1		
ZZZZZ		04/01/2013 18:17	1		
ZZZZZ		04/01/2013 18:30	1		
ZZZZZ		04/01/2013 18:42	1		
ZZZZZ		04/01/2013 18:54	1		
ZZZZZ		04/01/2013 19:06	1		
ZZZZZ		04/01/2013 19:19	1		
ZZZZZ		04/01/2013 19:31	1		
ZZZZZ		04/01/2013 19:43	1		
ZZZZZ		04/01/2013 19:55	1		
ZZZZZ		04/01/2013 20:08	1		
ZZZZZ		04/01/2013 20:20	1		
ZZZZZ		04/01/2013 20:32	1		
LCS 240-80082/24		04/01/2013 20:44	1	Z0040124.D	
MB 240-80082/25		04/01/2013 20:56	1	Z0040125.D	
ZZZZZ		04/01/2013 21:09	1		
ZZZZZ		04/01/2013 21:21	10		
240-22513-D-3 MS		04/01/2013 21:33	10	Z0040128.D	
240-22513-D-3 MSD		04/01/2013 21:45	10	Z0040129.D	
ZZZZZ		04/01/2013 21:58	10		
240-22510-2	MRC-MW27A-032713	04/01/2013 22:10	10	Z0040131.D	
ZZZZZ		04/01/2013 22:22	1		
ZZZZZ		04/01/2013 22:34	1		
240-22510-3	MRC-MW27B-032713	04/01/2013 22:46	1	Z0040134.D	
ZZZZZ		04/01/2013 22:59	1		
ZZZZZ		04/01/2013 23:11	1		
ZZZZZ		04/01/2013 23:23	1		
ZZZZZ		04/01/2013 23:35	1		
ZZZZZ		04/01/2013 23:48	1		
ZZZZZ		04/02/2013 00:00	1		
ZZZZZ		04/02/2013 00:12	1		
ZZZZZ		04/02/2013 00:24	1		
ZZZZZ		04/02/2013 00:36	1		

RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVRT 240-80082/1 Calibration Date: 04/01/2013 15:36

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040101.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	103645		107	116	-7.8	30.0
Ethene	Ave	94091	93192		201	203	-1.0	30.0
Acetylene	Ave	27012	29865		208	188	10.6	30.0
Ethane	Ave	102982	99777		211	218	-3.1	30.0
Propene	Ave	85073	82354		295	305	-3.2	30.0
Propane	Ave	101861	96961		304	319	-4.8	30.0
Propane, 2-methyl	Ave	100175	95340		400	420	-4.8	30.0
1,1,1-Trifluoroethane	Ave	37902	41352		2660	2440	9.1	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVRT 240-80082/1 Calibration Date: 04/01/2013 15:36

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040101.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.70	2.60	2.80

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: MB 240-79864/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0032905.D Lab File ID:(2)

Date Analyzed:(1) 03/29/2013 11:27 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-79864/4	03/29/2013 11:15	
	240-22447-F-2 MS	03/29/2013 11:51	
	240-22447-F-2 MSD	03/29/2013 12:04	
MRC-MW27A-032713	240-22510-2	03/29/2013 14:06	
MRC-MW24A-032713	240-22510-5	03/29/2013 14:30	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-79864/5

Matrix: Water | Lab File ID: Z0032905.D

Analysis Method: RSK-175 | Date Collected:

Sample wt/vol: 17(mL) | Date Analyzed: 03/29/2013 11:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 79864 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.232	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	100		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032904.D

Lab ID: LCS 240-79864/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	218	107	64-130	
Ethane	218	226	104	77-127	
Methane	116	110	95	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: MB 240-80082/25

Matrix: Water Date Extracted:

Lab File ID:(1) Z0040125.D Lab File ID:(2)

Date Analyzed:(1) 04/01/2013 20:56 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-80082/24	04/01/2013 20:44	
	240-22513-D-3 MS	04/01/2013 21:33	
	240-22513-D-3 MSD	04/01/2013 21:45	
MRC-MW27A-032713	240-22510-2	04/01/2013 22:10	
MRC-MW27B-032713	240-22510-3	04/01/2013 22:46	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80082/25

Matrix: Water Lab File ID: Z0040125.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 04/01/2013 20:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80082 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.167	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	93		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040124.D

Lab ID: LCS 240-80082/24 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	186	91	64-130	
Ethane	218	210	96	77-127	
Methane	116	103	89	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040128.D

Lab ID: 240-22513-D-3 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	2030	12	1750	86	51-129	
Ethane	2180	5.0 U	1960	90	59-133	
Methane	1160	11000	11900	113	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040129.D

Lab ID: 240-22513-D-3 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	2030	1720	84	2	34	51-129	
Ethane	2180	1940	89	1	34	59-133	
Methane	1160	12000	122	1	42	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032907.D

Lab ID: 240-22447-F-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	2030	8.2	2040	100	51-129	
Ethane	2180	5.0 U	2150	99	59-133	
Methane	1160	4700	6340	141	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0032908.D

Lab ID: 240-22447-F-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	2030	1980	97	3	34	51-129	
Ethane	2180	2120	97	2	34	59-133	
Methane	1160	6470	152	2	42	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW27A-032713	240-22510-2	95
MRC-MW27A-032713	240-22510-2	86
MRC-MW27B-032713	240-22510-3	89
MRC-MW24A-032713	240-22510-5	93
	MB 240-79864/5	100
	MB 240-80082/25	93
	LCS 240-79864/4	112
	LCS 240-80082/24	94
	240-22447-F-2 MS	103
	240-22513-D-3 MS	91
	240-22447-F-2 MSD	104
	240-22513-D-3 MSD	91

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW27A-032713	240-22510-2
MRC-MW27B-032713	240-22510-3
MRC-MW24A-032713	240-22510-5

Comments:

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22510-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW27A-032713	240-22510-2
MRC-MW27B-032713	240-22510-3
MRC-MW24A-032713	240-22510-5
MRC-MW-96A-032713	240-22510-8
MRC-MW-96B-032713	240-22510-9

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/01/2013 11:01 End Date: 04/01/2013 14:20

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-80032/1-A			11:01	X
IC 240-80032/2-A			11:02	X
IC 240-80032/3-A			11:04	X
IC 240-80032/4-A			11:06	X
IC 240-80032/5-A			11:07	X
IC 240-80032/6-A			11:08	X
ICV 240-80032/7-A	1		11:10	X
ICB 240-80032/8-A	1		11:12	X
CRA 240-80032/9-A	1		11:13	X
CCVL 240-80032/10-A	1		11:15	X
CCB 240-80032/11-A			11:17	
ZZZZZZ			11:19	
ZZZZZZ			11:20	
ZZZZZZ			11:22	
ZZZZZZ			11:23	
ZZZZZZ			11:25	
ZZZZZZ			11:26	
ZZZZZZ			11:27	
CCV 240-80032/12-A			11:29	
CCB 240-80032/11-A			11:30	
CCV 240-80032/12-A			11:44	
CCB 240-80032/11-A			11:45	
ZZZZZZ			11:46	
ZZZZZZ			11:48	
ZZZZZZ			11:49	
ZZZZZZ			11:51	
ZZZZZZ			11:53	
ZZZZZZ			11:54	
ZZZZZZ			11:56	
ZZZZZZ			11:57	
ZZZZZZ			11:58	
ZZZZZZ			12:00	
CCV 240-80032/12-A			12:02	
CCB 240-80032/11-A			12:04	
ZZZZZZ			12:05	
ZZZZZZ			12:07	
ZZZZZZ			12:08	
ZZZZZZ			12:10	
ZZZZZZ			12:11	
ZZZZZZ			12:12	
ZZZZZZ			12:16	
ZZZZZZ			12:17	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/01/2013 11:01 End Date: 04/01/2013 14:20

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			12:18	
ZZZZZZ			12:19	
CCV 240-80032/12-A			12:21	
CCB 240-80032/11-A			12:22	
ZZZZZZ			12:24	
ZZZZZZ			12:25	
ZZZZZZ			12:27	
ZZZZZZ			12:28	
ZZZZZZ			12:30	
ZZZZZZ			12:31	
ZZZZZZ			12:33	
ZZZZZZ			12:34	
ZZZZZZ			12:35	
ZZZZZZ			12:37	
CCV 240-80032/12-A			12:38	
CCB 240-80032/11-A			12:40	
ZZZZZZ			12:41	
ZZZZZZ			12:43	
ZZZZZZ			12:45	
ZZZZZZ			12:46	
ZZZZZZ			12:47	
ZZZZZZ			12:49	
ZZZZZZ			12:50	
ZZZZZZ			12:52	
ZZZZZZ			12:54	
ZZZZZZ			12:55	
CCV 240-80032/12-A	1		12:58	X
CCB 240-80032/11-A	1		13:00	X
ZZZZZZ			13:02	
ZZZZZZ			13:03	
ZZZZZZ			13:04	
ZZZZZZ			13:06	
ZZZZZZ			13:07	
ZZZZZZ			13:09	
MB 240-79887/1-A	1	T	13:11	X
ZZZZZZ			13:12	
ZZZZZZ			13:13	
240-22544-K-4-B MS	1	T	13:15	X
CCV 240-80032/12-A	1		13:16	X
CCB 240-80032/11-A	1		13:17	X
240-22544-K-4-C MSD	1	T	13:19	X
ZZZZZZ			13:21	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/01/2013 11:01 End Date: 04/01/2013 14:20

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			13:22	
ZZZZZZ			13:24	
ZZZZZZ			13:26	
ZZZZZZ			13:27	
ZZZZZZ			13:29	
ZZZZZZ			13:30	
ZZZZZZ			13:32	
ZZZZZZ			13:35	
CCV 240-80032/12-A	1		13:38	X
CCB 240-80032/11-A	1		13:39	X
ZZZZZZ			13:40	
ZZZZZZ			13:42	
ZZZZZZ			13:43	
ZZZZZZ			13:45	
ZZZZZZ			13:47	
ZZZZZZ			13:48	
ZZZZZZ			13:50	
240-22510-2	1	T	13:51	X
240-22510-3	1	T	13:53	X
240-22510-5	1	T	13:54	X
CCV 240-80032/12-A	1		13:56	X
CCB 240-80032/11-A	1		13:57	X
ZZZZZZ			13:59	
ZZZZZZ			14:01	
ZZZZZZ			14:02	
LCS 240-79887/2-A	1	T	14:04	X
ZZZZZZ			14:05	
ZZZZZZ			14:07	
ZZZZZZ			14:11	
CCV 240-80032/12-A	1		14:13	X
CCB 240-80032/11-A	1		14:14	X
ZZZZZZ			14:15	
ZZZZZZ			14:17	
CCV 240-80032/12-A			14:19	
CCB 240-80032/11-A			14:20	

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00343

Analyte	ICV 240-80032/7-A 04/01/2013 11:10				CCVL 240-80032/10-A 04/01/2013 11:15				CCV 240-80032/12-A 04/01/2013 12:58			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.59		2.50	104	5.01		5.00	100	4.66		5.00	93

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00343

Analyte	CCV 240-80032/12-A 04/01/2013 13:16				CCV 240-80032/12-A 04/01/2013 13:38				CCV 240-80032/12-A 04/01/2013 13:56			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.70		5.00	94	4.67		5.00	93	4.66		5.00	93

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00343

Analyte	CCV 240-80032/12-A 04/01/2013 14:13											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.57		5.00	91								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Method: 7470A Instrument ID: H1

Lab Sample ID: CRA 240-800327/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00343

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.229		115	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80032/8-A 04/01/2013 11:12		CCB 240-80032/11-A 04/01/2013 13:00		CCB 240-80032/11-A 04/01/2013 13:17		CCB 240-80032/11-A 04/01/2013 13:39	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-80032/11-A 04/01/2013 13:57 Found	C	CCB 240-80032/11-A 04/01/2013 14:14 Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U				

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-79887/1-A	03/29/2013 15:05	79887		100	100
LCS 240-79887/2-A	03/29/2013 15:05	79887		100	100
240-22544-K-4-B MS	03/29/2013 15:05	79887		100	100
240-22544-K-4-C MSD	03/29/2013 15:05	79887		100	100
240-22510-2	03/29/2013 15:05	79887		100	100
240-22510-3	03/29/2013 15:05	79887		100	100
240-22510-5	03/29/2013 15:05	79887		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-79887/1-A

Instrument Code: H1 Batch No.: 80120

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-79887/2-A

Lab Name: TestAmerica Canton Job No.: 240-22510-1

Sample Matrix: Water LCS Source: MTHGCALW_00342

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.65		93	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22544-K-4-B MS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.02		0.20	U	1.00	102	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22544-K-4-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.02		1.00	102	69-134	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: (H1)

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22510-1

SDG No.:

Instrument ID: H1 Date: 04/01/2011 10:45

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/16/2013 18:11 End Date: 04/16/2013 20:12

Lab Sample Id	D/F	Type	Time	Analytes: Hg
IC 440-98554/6-A	1		18:11	X
IC 440-98554/7-A	1		18:14	X
IC 440-98554/8-A	1		18:16	X
IC 440-98554/9-A	1		18:19	X
IC 440-98554/10-A	1		18:21	X
IC 440-98554/11-A	1		18:24	X
ICV 440-98554/1-A	1		18:27	X
ICB 440-98554/2-A	1		18:29	X
CRA 440-98554/5-A	1		18:32	X
ZZZZZZ			18:34	
ZZZZZZ			18:37	
ZZZZZZ			18:39	
ZZZZZZ			18:42	
ZZZZZZ			18:44	
ZZZZZZ			18:47	
ZZZZZZ			18:49	
ZZZZZZ			18:52	
ZZZZZZ			18:54	
ZZZZZZ			18:56	
CCV 440-98554/3-A	1		18:59	X
CCB 440-98554/4-A	1		19:01	X
MB 440-98546/1-A	1	T	19:04	X
LCS 440-98546/2-A	1	T	19:06	X
ZZZZZZ			19:09	
240-22475-D-4-F MS	1	T	19:11	X
240-22475-D-4-G MSD	1	T	19:14	X
ZZZZZZ			19:16	
ZZZZZZ			19:19	
ZZZZZZ			19:22	
ZZZZZZ			19:24	
CCV 440-98554/3-A	1		19:27	X
CCB 440-98554/4-A	1		19:29	X
ZZZZZZ			19:32	
240-22510-8	1	T	19:34	X
240-22510-9	1	T	19:37	X
ZZZZZZ			19:39	
ZZZZZZ			19:42	
ZZZZZZ			19:44	
ZZZZZZ			19:47	
ZZZZZZ			19:49	
CCV 440-98554/3-A	1		19:52	X
CCB 440-98554/4-A	1		19:54	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/16/2013 18:11 End Date: 04/16/2013 20:12

Lab Sample Id	D/F	Type	Time	Analytes																											
				Hg																											
ZZZZZZ			19:57																												
ZZZZZZ			19:59																												
ZZZZZZ			20:02																												
ZZZZZZ			20:04																												
CCV 440-98554/3-A			20:07																												
CCB 440-98554/4-A			20:09																												
CRA 440-98554/5-A	1		20:12	X																											

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	ICV 440-98554/1-A 04/16/2013 18:27				CCV 440-98554/3-A 04/16/2013 18:59				CCV 440-98554/3-A 04/16/2013 19:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.35		8.00	92	4.04		4.00	101	3.99		4.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	CCV 440-98554/3-A 04/16/2013 19:52											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.14		4.00	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-98554/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.194	J	97	50-150

Lab Sample ID: CRA 440-98554/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.191	J	96	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-98554/2-A 04/16/2013 18:29		CCB 440-98554/4-A 04/16/2013 19:01		CCB 440-98554/4-A 04/16/2013 19:29		CCB 440-98554/4-A 04/16/2013 19:54	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98546/1-A	04/16/2013 14:05	98546		20	20
LCS 440-98546/2-A	04/16/2013 14:05	98546		20	20
240-22475-D-4-F MS	04/16/2013 14:05	98546		20	20
240-22475-D-4-G MSD	04/16/2013 14:05	98546		20	20
240-22510-8	04/16/2013 14:05	98546		20	20
240-22510-9	04/16/2013 14:05	98546		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98546/1-A

Instrument Code: CV-HG3 Batch No.: 98681

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-98546/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00077

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	7.92		99	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22475-D-4-F MS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	7.18		0.15	J	8.00	88	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22475-D-4-G MSD

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.35		8.00	90	70-130	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

Lab Sample Id	D/F	Type	Time	Analytes						
				Ca	Fe	K	Mg	Mn	Na	SiO2
ICIS 240-80191/1	1		09:47	X	X	X	X	X	X	X
CALSTD 240-80191/2 IC			09:51	X	X	X	X	X	X	X
CALSTD 240-80191/3 IC			09:55	X	X	X	X	X	X	X
ICV 240-80191/4	1		09:59	X	X	X	X	X	X	X
ICB 240-80191/5	1		10:03	X	X	X	X	X	X	X
CRI 240-80191/6	1		10:07							X
ZZZZZZ			10:11							
ICSA 240-80191/8	1		10:15	X	X	X	X	X	X	
ICSAB 240-80191/9	1		10:19	X	X	X	X	X	X	
CCV 240-80191/10			10:23							
CCB 240-80191/11			10:27							
ZZZZZZ			10:31							
ZZZZZZ			10:35							
ZZZZZZ			10:39							
ZZZZZZ			10:43							
ZZZZZZ			10:47							
ZZZZZZ			10:51							
CCV 240-80191/18	1		10:55	X	X	X	X	X	X	X
CCB 240-80191/19	1		10:59	X	X	X	X	X	X	X
ZZZZZZ			12:12							
ZZZZZZ			12:16							
ZZZZZZ			12:20							
CRI 240-80191/23	1		12:26	X	X	X	X	X	X	
MB 240-79873/1-A	1	R	12:30	X	X	X	X	X	X	X
LCS 240-79873/2-A	1	R	12:34	X	X	X	X	X	X	X
240-22303-I-8-A SD ^5	5	R	12:38	X	X	X	X	X	X	
240-22303-I-8-B MS	1	R	12:42	X	X	X	X	X	X	
240-22303-I-8-C MSD	1	R	12:46	X	X	X	X	X	X	
ZZZZZZ			12:49							
CCV 240-80191/30	1		12:55	X	X	X	X	X	X	X
CCB 240-80191/31	1		12:59	X	X	X	X	X	X	X
EMPTY 240-80191/32			13:03							
ZZZZZZ			13:07							
ZZZZZZ			13:11							
ZZZZZZ			13:15							
240-22510-2	1	R	13:19	X	X	X	X		X	X
240-22510-3	1	R	13:36	X	X	X	X	X	X	X
EMPTY 240-80191/38			13:40							
240-22510-2	5	R	14:05					X		
240-22510-5	1	R	14:09	X	X	X	X		X	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/01/2013 09:47 End Date: 04/01/2013 21:37

Lab Sample Id	D/F	Type	Time	Analytes						
				Ca	Fe	K	Mg	Mn	Na	SiO2
240-22510-5	2	R	14:15					X		
CCV 240-80191/42	1		14:19	X	X	X	X	X	X	X
CCB 240-80191/43	1		14:23	X	X	X	X	X	X	X
CRI 240-80191/44	1		14:27	X	X	X	X	X	X	
CRI 240-80191/45	1		14:31							X
ZZZZZZ			14:35							
ZZZZZZ			14:39							
ZZZZZZ			14:43							
ZZZZZZ			14:47							
ZZZZZZ			14:51							
ZZZZZZ			14:54							
ZZZZZZ			14:59							
ZZZZZZ			15:02							
CCV 240-80191/54			15:06							
CCB 240-80191/55			15:10							
ZZZZZZ			15:14							
ZZZZZZ			15:18							
ZZZZZZ			15:22							
ZZZZZZ			15:26							
ZZZZZZ			15:30							
ZZZZZZ			15:34							
ZZZZZZ			15:38							
ZZZZZZ			15:42							
ZZZZZZ			15:46							
ZZZZZZ			15:50							
CCV 240-80191/66			15:53							
CCB 240-80191/67			15:57							
ZZZZZZ			16:01							
ZZZZZZ			16:05							
ZZZZZZ			16:09							
ZZZZZZ			16:13							
ZZZZZZ			16:17							
ZZZZZZ			16:21							
ZZZZZZ			16:25							
ZZZZZZ			16:29							
ZZZZZZ			16:33							
ZZZZZZ			16:37							
CCV 240-80191/78			16:41							
CCB 240-80191/79			16:45							
ZZZZZZ			16:49							

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-80191/4 04/01/2013 09:59				CCV 240-80191/18 04/01/2013 10:55				CCV 240-80191/30 04/01/2013 12:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25600		25000	102	50400		50000	101	50500		50000	101
Iron	12900		12500	104	24800		25000	99	24600		25000	98
Magnesium	25400		25000	101	50400		50000	101	50000		50000	100
Manganese	1540		1500	103	1900		2000	95	1960		2000	98
Potassium	25100		25000	101	49600		50000	99	49800		50000	100
SiO2, Silica	6840		6420	107	11000		10700	103	11300		10700	105
Sodium	25300		25000	101	49400		50000	99	50200		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	CCV 240-80191/42 04/01/2013 14:19											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	51300		50000	103								
Iron	25100		25000	100								
Magnesium	51500		50000	103								
Manganese	1960		2000	98								
Potassium	50700		50000	101								
SiO2, Silica	11300		10700	106								
Sodium	50200		50000	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-80191/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1070	J	100	70-130

Lab Sample ID: CRI 240-80191/23 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	4980	J	100	70-130
Iron	200	201		101	70-130
Potassium	5000	4920	J	98	70-130
Magnesium	5000	5030		101	70-130
Manganese	15.0	15.2		101	70-130
Sodium	5000	5030		101	70-130

Lab Sample ID: CRI 240-80191/44 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5080		102	70-130
Iron	200	207		104	70-130
Potassium	5000	5060		101	70-130
Magnesium	5000	5230		105	70-130
Manganese	15.0	15.4		102	70-130
Sodium	5000	5060		101	70-130

Lab Sample ID: CRI 240-80191/45 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1080	J	101	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80191/5 04/01/2013 10:03		CCB 240-80191/19 04/01/2013 10:59		CCB 240-80191/31 04/01/2013 12:59		CCB 240-80191/43 04/01/2013 14:23	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U	5000	U
Iron	200	200	U	200	U	200	U	200	U
Magnesium	5000	5000	U	5000	U	5000	U	5000	U
Manganese	15	15	U	15	U	15	U	15	U
Potassium	5000	5000	U	5000	U	5000	U	5000	U
SiO2, Silica	1100	1100	U	1100	U	1100	U	1100	U
Sodium	5000	5000	U	5000	U	5000	U	5000	U

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-79873/1-A	03/29/2013 08:10	79873		50	50
LCS 240-79873/2-A	03/29/2013 08:10	79873		50	50
240-22303-I-8-B MS	03/29/2013 08:10	79873		50	50
240-22303-I-8-C MSD	03/29/2013 08:10	79873		50	50
240-22510-2	03/29/2013 08:10	79873		50	50
240-22510-3	03/29/2013 08:10	79873		50	50
240-22510-5	03/29/2013 08:10	79873		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-79873/1-A

Instrument Code: I9 Batch No.: 80191

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	139	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	39.8	J		6010C
7439-96-5	Manganese	2.06	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-79873/2-A

Lab Name: TestAmerica Canton Job No.: 240-22510-1

Sample Matrix: Water LCS Source: MTICP2A_00024

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	48200		96	80	120		6010C
Iron	1000	971		97	80	120		6010C
Potassium	50000	47400		95	80	120		6010C
Magnesium	50000	47500		95	80	120		6010C
Manganese	500	485		97	80	120		6010C
Sodium	50000	47800		96	80	120		6010C
SiO2, Silica	2140	2150		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22303-I-8-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-22510-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	18000		17800	J	2.5		6010C
Iron	390		1000	U	NC		6010C
Potassium	3100	J	3260	J	NC		6010C
Magnesium	3900	J	3930	J	0.10		6010C
Manganese	37		37.4	J	2.1		6010C
Sodium	12000		12200	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-I-8-B MS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	66000		18000		50000	95	75-125		6010C
Iron	1380		390		1000	99	75-125		6010C
Potassium	51500		3100	J	50000	97	75-125		6010C
Magnesium	52500		3900	J	50000	97	75-125		6010C
Manganese	530		37		500	99	75-125		6010C
Sodium	60500		12000		50000	96	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-I-8-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	66200		50000	96	75-125	0	20		6010C
Iron	1370		1000	98	75-125	1	20		6010C
Potassium	51000		50000	96	75-125	1	20		6010C
Magnesium	51900		50000	96	75-125	1	20		6010C
Manganese	519		500	96	75-125	2	20		6010C
Sodium	60200		50000	96	75-125	0	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICSA 240-80191/8 Instrument ID: I9

Lab File ID: I9040113A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Calcium	**500000**	**471560**	**94**
Iron	**200000**	**184480**	**92**
Magnesium	**500000**	**490200**	**98**
Manganese		**2.89**	
Potassium		**141**	
Sodium		**45.3**	
Aluminum	*500000*	*495420*	*99*
Antimony		*-5.16*	
Arsenic		*-2.18*	
Barium		*0.0917*	
Beryllium		*-0.372*	
Boron		*0.734*	
Cadmium		*0.655*	
Chromium		*2.79*	
Cobalt		*-1.22*	
Copper		*-2.74*	
Lead		*4.40*	
Lithium		*-26.7*	
Molybdenum		*-2.02*	
Nickel		*1.98*	
Selenium		*5.12*	
Silicon		*-3.68*	
Silver		*-0.697*	
Strontium		*7.08*	
Thallium		*-2.82*	
Tin		*5.55*	
Titanium		*-0.563*	
Vanadium		*-1.82*	
Zinc		*10.5*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICSAB 240-80191/9 Instrument ID: I9

Lab File ID: I9040113A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Calcium	**500000**	**478460**	**96**
Iron	**200000**	**190960**	**95**
Magnesium	**500000**	**505750**	**101**
Manganese	**500**	**492**	**98**
Potassium	**10000**	**10478**	**105**
Sodium	**10000**	**10497**	**105**
Aluminum	*500000*	*511460*	*102*
Antimony	*1000*	*1016*	*102*
Arsenic	*1000*	*1019*	*102*
Barium	*500*	*487*	*97*
Beryllium	*500*	*487*	*97*
Boron	*500*	*508*	*102*
Cadmium	*1000*	*1020*	*102*
Chromium	*500*	*481*	*96*
Cobalt	*500*	*490*	*98*
Copper	*500*	*526*	*105*
Lead	*1000*	*912*	*91*
Lithium	*500*	*505*	*101*
Molybdenum	*1000*	*975*	*97*
Nickel	*1000*	*976*	*98*
Selenium	*1000*	*996*	*100*
Silicon	*10000*	*9933*	*99*
Silver	*1000*	*1100*	*110*
Strontium	*1500*	*1463*	*98*
Thallium	*1000*	*954*	*95*
Tin	*500*	*508*	*102*
Titanium	*500*	*514*	*103*
Vanadium	*500*	*480*	*96*
Zinc	*1000*	*1002*	*100*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22510-1

SDG No.:

Instrument ID: I9 Date: 10/16/2012 17:26

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 08:41 End Date: 04/05/2013 12:07

Lab Sample Id	D/F	Type	Time	Analytes														
				Ag	As	Ba	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn
RINSE 440-96433/1			08:41															
STD0 440-96433/2 IC	1		08:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD1 440-96433/3 IC	1		08:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD2 440-96433/4 IC	1		08:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD3 440-96433/5 IC	1		08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD4 440-96433/6 IC	1		08:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICV 440-96433/7	1		08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICB 440-96433/8	1		09:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI 440-96433/9	1		09:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI 440-96433/10	1		09:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RINSE 440-96433/11			09:17															
CCV 440-96433/12	1		10:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-96433/13	1		10:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA 440-96433/14	1		10:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSAB 440-96433/15	1		10:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			10:44															
MB 440-96231/1-A	1	R	10:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCS 440-96231/2-A	1	R	10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			10:52															
240-22303-J-2-B MS	1	R	10:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-22303-J-2-C MSD	1	R	10:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-22303-J-2-A PDS	1	R	11:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			11:03															
CCV 440-96433/24	1		11:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			11:08															
CCB 440-96433/26	1		11:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			11:13															
ZZZZZZ			11:16															
ZZZZZZ			11:19															
ZZZZZZ			11:21															
ZZZZZZ			11:24															
ZZZZZZ			11:27															
ZZZZZZ			11:29															
ZZZZZZ			11:32															
240-22510-2	1	R	11:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-22510-3	1	R	11:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-96433/37	1		11:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			11:43															
CCB 440-96433/39	1		11:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-22510-5	1	R	11:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-22510-8	1	R	11:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-22510-9	1	R	11:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 08:41 End Date: 04/05/2013 12:07

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ag	As	Ba	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn															
ZZZZZZ			11:57																													
ZZZZZZ			11:59																													
440-42596-K-1-B SD ^5	5	R	12:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
CCV 440-96433/46	1		12:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
CCB 440-96433/47	1		12:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-96433/7 04/05/2013 08:57				CCV 440-96433/12 04/05/2013 10:33				CCV 440-96433/24 04/05/2013 11:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.9		25.0	91	51.1		50.0	102	52.4		50.0	105
Arsenic	23.7		25.0	95	49.0		50.0	98	49.8		50.0	100
Barium	23.7		25.0	95	50.5		50.0	101	50.7		50.0	101
Cadmium	23.7		25.0	95	48.9		50.0	98	49.8		50.0	100
Chromium	24.3		25.0	97	51.6		50.0	103	51.0		50.0	102
Cobalt	24.4		25.0	97	50.9		50.0	102	49.6		50.0	99
Copper	22.5		25.0	90	47.4		50.0	95	46.2		50.0	92
Lead	23.3		25.0	93	52.4		50.0	105	52.6		50.0	105
Molybdenum	22.9		25.0	91	45.9		50.0	92	46.9		50.0	94
Nickel	22.7		25.0	91	47.4		50.0	95	46.2		50.0	92
Selenium	24.3		25.0	97	49.6		50.0	99	50.4		50.0	101
Silver	23.0		25.0	92	49.3		50.0	99	50.9		50.0	102
Thallium	22.5		25.0	90	53.1		50.0	106	53.6		50.0	107
Vanadium	24.5		25.0	98	51.3		50.0	103	51.0		50.0	102
Zinc	22.5		25.0	90	50.6		50.0	101	51.2		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	CCV 440-96433/37 04/05/2013 11:40				CCV 440-96433/46 04/05/2013 12:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	52.0		50.0	104	51.7		50.0	103				
Arsenic	49.4		50.0	99	49.5		50.0	99				
Barium	50.7		50.0	101	50.3		50.0	101				
Cadmium	49.3		50.0	99	49.1		50.0	98				
Chromium	51.3		50.0	103	50.7		50.0	101				
Cobalt	50.4		50.0	101	49.7		50.0	99				
Copper	46.6		50.0	93	46.5		50.0	93				
Lead	52.6		50.0	105	52.6		50.0	105				
Molybdenum	46.5		50.0	93	45.8		50.0	92				
Nickel	47.0		50.0	94	46.5		50.0	93				
Selenium	50.5		50.0	101	50.9		50.0	102				
Silver	50.5		50.0	101	50.2		50.0	100				
Thallium	53.1		50.0	106	53.5		50.0	107				
Vanadium	51.4		50.0	103	51.3		50.0	103				
Zinc	50.7		50.0	101	51.1		50.0	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96433/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.925	J	93	50-150
Arsenic	1.00	1.04		104	50-150
Cadmium	0.500	0.504	J	101	50-150
Barium	1.00	1.01		101	50-150
Chromium	1.00	0.962	J	96	50-150
Copper	1.00	0.889	J	89	50-150
Nickel	1.00	0.765	J	77	50-150
Lead	1.00	0.963	J	96	50-150
Selenium	1.00	0.877	J	88	50-150
Cobalt	0.500	0.459	J	92	50-150
Silver	1.00	0.855	J	86	50-150
Thallium	1.00	0.910	J	91	50-150
Zinc	5.00	5.02	J	100	50-150
Molybdenum	1.00	0.944	J	94	50-150
Vanadium	2.00	1.91	J	96	50-150

Lab Sample ID: CRI 440-96433/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.93	J	96	50-150
Arsenic	2.00	1.95		97	50-150
Cadmium	1.00	1.02		102	50-150
Barium	2.00	2.07		104	50-150
Chromium	2.00	2.00		100	50-150
Copper	2.00	1.80	J	90	50-150
Nickel	2.00	1.82	J	91	50-150
Lead	2.00	1.97		99	50-150
Selenium	2.00	1.88	J	94	50-150
Cobalt	1.00	0.982	J	98	50-150
Silver	2.00	1.92		96	50-150
Thallium	2.00	1.88		94	50-150
Zinc	10.0	10.5	J	105	50-150
Molybdenum	2.00	1.95	J	98	50-150
Vanadium	4.00	3.90		98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96433/8 04/05/2013 09:05		CCB 440-96433/13 04/05/2013 10:36		CCB 440-96433/26 04/05/2013 11:11		CCB 440-96433/39 04/05/2013 11:46	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.229	J	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.245	J	1.0	U	1.0	U
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-96433/47 04/05/2013 12:07 Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U						
Arsenic	1.0	1.0	U						
Barium	1.0	1.0	U						
Cadmium	1.0	1.0	U						
Chromium	2.0	2.0	U						
Cobalt	1.0	1.0	U						
Copper	2.0	2.0	U						
Lead	1.0	1.0	U						
Molybdenum	2.0	0.255	J						
Nickel	2.0	2.0	U						
Selenium	2.0	2.0	U						
Silver	1.0	0.244	J						
Thallium	1.0	1.0	U						
Vanadium	2.0	2.0	U						
Zinc	20	20	U						

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-96231/1-A	04/04/2013 15:50	96231		50	50
LCS 440-96231/2-A	04/04/2013 15:50	96231		50	50
240-22303-J-2-B MS	04/04/2013 15:50	96231		50	50
240-22303-J-2-C MSD	04/04/2013 15:50	96231		50	50
240-22510-2	04/04/2013 15:50	96231		50	50
240-22510-3	04/04/2013 15:50	96231		50	50
240-22510-5	04/04/2013 15:50	96231		50	50
240-22510-8	04/04/2013 15:50	96231		50	50
240-22510-9	04/04/2013 15:50	96231		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96231/1-A

Instrument Code: ICPMS4 Batch No.: 96433

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	1.00	J		6020
7440-62-2	Vanadium	20	U		6020

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-96231/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	79.5		99	80	120		6020
Arsenic	80.0	76.3		95	80	120		6020
Cadmium	80.0	76.6		96	80	120		6020
Barium	80.0	76.8		96	80	120		6020
Chromium	80.0	77.8		97	80	120		6020
Copper	80.0	71.5		89	80	120		6020
Nickel	80.0	71.4		89	80	120		6020
Lead	80.0	80.2		100	80	120		6020
Selenium	80.0	79.3		99	80	120		6020
Cobalt	80.0	76.4		95	80	120		6020
Silver	80.0	81.1		101	80	120		6020
Thallium	80.0	80.3		100	80	120		6020
Zinc	80.0	75.1		94	80	120		6020
Molybdenum	80.0	71.1		89	80	120		6020
Vanadium	80.0	75.4		94	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICSA 440-96433/14 Instrument ID: ICPMS4

Lab File ID: 041ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Antimony		**0.273**	
Arsenic		**0.144**	
Barium		**0.224**	
Cadmium		**0.0840**	
Chromium		**1.42**	
Cobalt		**0.0510**	
Copper		**0.572**	
Lead		**0.106**	
Molybdenum	**2000**	**2134**	**107**
Nickel		**0.564**	
Selenium		**-0.120**	
Silver		**0.0600**	
Thallium		**-0.0030**	
Vanadium		**0.0720**	
Zinc		**14.7**	
Aluminum	*100000*	*96858*	*97*
Calcium	*100000*	*101659*	*102*
Cerium		*0.0190*	
Iron	*100000*	*0.0000*	*0*
Magnesium	*100000*	*102062*	*102*
Manganese		*0.242*	
Potassium	*100000*	*101597*	*102*
Sodium	*100000*	*105450*	*105*
Sr		*4.75*	
Tin		*0.198*	
Uranium		*0.0190*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICSAB 440-96433/15 Instrument ID: ICPMS4

Lab File ID: 042ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**20.0**	**21.3**	**107**
Arsenic	**20.0**	**20.8**	**104**
Barium	**20.0**	**22.4**	**112**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.5**	**102**
Cobalt	**20.0**	**19.6**	**98**
Copper	**20.0**	**18.6**	**93**
Lead	**20.0**	**20.0**	**100**
Molybdenum	**2020**	**2117**	**105**
Nickel	**20.0**	**19.8**	**99**
Selenium	**20.0**	**20.9**	**105**
Silver	**20.0**	**19.7**	**99**
Thallium	**20.0**	**19.1**	**95**
Vanadium	**20.0**	**21.1**	**106**
Zinc	**20.0**	**28.9**	**144**
Aluminum	*100000*	*94215*	*94*
Calcium	*101000*	*100899*	*100*
Cerium	*20.0*	*22.4*	*112*
Iron	*100000*	*0.0000*	*0*
Magnesium	*101000*	*100468*	*100*
Manganese	*20.0*	*21.4*	*107*
Potassium	*101000*	*101002*	*100*
Sodium	*101000*	*104455*	*104*
Sr	*20.0*	*28.0*	*140*
Tin	*20.0*	*21.8*	*109*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-J-2-B MS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	80.9		2.0	U	80.0	101	75-125		6020
Arsenic	75.9		5.0	U	80.0	95	75-125		6020
Beryllium	90.6		11		80.0	100	75-125		6020
Cadmium	75.9		0.39	J	80.0	94	75-125		6020
Barium	239		160		80.0	105	75-125		6020
Chromium	75.5		2.0	U	80.0	94	75-125		6020
Copper	106		30		80.0	95	75-125		6020
Nickel	216		150		80.0	88	75-125		6020
Lead	76.1		0.26	J	80.0	95	75-125		6020
Selenium	76.0		0.79	J	80.0	94	75-125		6020
Cobalt	184		110		80.0	90	75-125		6020
Silver	78.5		0.32	J	80.0	98	75-125		6020
Thallium	77.0		0.36	J	80.0	96	75-125		6020
Zinc	387		310		80.0	100	75-125		6020
Molybdenum	72.3		0.72	J	80.0	90	75-125		6020
Vanadium	76.6		0.83	J	80.0	95	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-J-2-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.9		80.0	100	75-125	1	20		6020
Arsenic	76.5		80.0	96	75-125	1	20		6020
Beryllium	91.5		80.0	101	75-125	1	20		6020
Cadmium	74.7		80.0	93	75-125	2	20		6020
Barium	238		80.0	104	75-125	1	20		6020
Chromium	75.6		80.0	95	75-125	0	20		6020
Copper	107		80.0	97	75-125	1	20		6020
Nickel	217		80.0	89	75-125	1	20		6020
Lead	77.0		80.0	96	75-125	1	20		6020
Selenium	77.6		80.0	96	75-125	2	20		6020
Cobalt	188		80.0	95	75-125	2	20		6020
Silver	78.3		80.0	97	75-125	0	20		6020
Thallium	77.8		80.0	97	75-125	1	20		6020
Zinc	384		80.0	96	75-125	1	20		6020
Molybdenum	72.1		80.0	89	75-125	0	20		6020
Vanadium	77.8		80.0	96	75-125	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22303-J-2-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.2		2.0	U	80.0	99	75-125		6020
Arsenic	75.6		5.0	U	80.0	95	75-125		6020
Beryllium	89.2		11		80.0	98	75-125		6020
Cadmium	73.9		0.39	J	80.0	92	75-125		6020
Barium	243		160		80.0	110	75-125		6020
Chromium	73.7		2.0	U	80.0	92	75-125		6020
Copper	104		30		80.0	93	75-125		6020
Nickel	215		150		80.0	87	75-125		6020
Lead	74.9		0.26	J	80.0	93	75-125		6020
Selenium	76.0		0.79	J	80.0	94	75-125		6020
Cobalt	183		110		80.0	88	75-125		6020
Silver	76.7		0.32	J	80.0	95	75-125		6020
Thallium	75.9		0.36	J	80.0	94	75-125		6020
Zinc	373		310		80.0	83	75-125		6020
Molybdenum	71.9		0.72	J	80.0	89	75-125		6020
Vanadium	75.5		0.83	J	80.0	93	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22510-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 12:15 End Date: 04/05/2013 14:15

Lab Sample Id	D/F	Type	Time	Analytes: Be
RINSE 440-96469/1			12:15	
STD0 440-96469/2 IC	1		12:18	X
STD1 440-96469/3 IC	1		12:20	X
STD2 440-96469/4 IC	1		12:23	X
STD3 440-96469/5 IC	1		12:26	X
STD4 440-96469/6 IC	1		12:29	X
ZZZZZZ			12:31	
ICV 440-96469/8	1		12:34	X
ICB 440-96469/9	1		12:36	X
CRI 440-96469/10	1		12:39	X
CRI 440-96469/11	1		12:42	X
ICSA 440-96469/12	1		12:44	X
ICSAB 440-96469/13	1		12:47	X
RINSE 440-96469/14			12:58	
MB 440-96231/1-A	1	R	13:01	X
LCS 440-96231/2-A	1	R	13:04	X
ZZZZZZ			13:06	
240-22303-J-2-B MS	1	R	13:09	X
240-22303-J-2-C MSD	1	R	13:12	X
240-22303-J-2-A PDS	1	R	13:14	X
ZZZZZZ			13:17	
ZZZZZZ			13:19	
ZZZZZZ			13:22	
CCV 440-96469/24	1		13:24	X
CCB 440-96469/25	1		13:27	X
ZZZZZZ			13:30	
ZZZZZZ			13:32	
ZZZZZZ			13:35	
ZZZZZZ			13:38	
ZZZZZZ			13:40	
ZZZZZZ			13:43	
ZZZZZZ			13:46	
CCV 440-96469/33	1		13:48	X
CCB 440-96469/34	1		13:51	X
240-22510-2	1	R	13:54	X
240-22510-3	1	R	13:57	X
240-22510-5	1	R	13:59	X
240-22510-8	1	R	14:02	X
240-22510-9	1	R	14:05	X
ZZZZZZ			14:07	
440-42596-K-1-B SD ^5	5	R	14:10	X
CCV 440-96469/42	1		14:13	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/05/2013 12:15 End Date: 04/05/2013 14:15

Lab Sample Id	D/F	Type	Time	Analytes
				Be
CCB 440-96469/43	1		14:15	X

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-96469/8 04/05/2013 12:34				CCV 440-96469/24 04/05/2013 13:24				CCV 440-96469/33 04/05/2013 13:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	23.6		25.0	94	51.1		50.0	102	50.9		50.0	102
Antimony	23.1		25.0	92	52.8		50.0	106	51.6		50.0	103
Arsenic	24.3		25.0	97	50.5		50.0	101	50.0		50.0	100
Barium	24.9		25.0	100	51.6		50.0	103	50.5		50.0	101
Cadmium	24.5		25.0	98	51.3		50.0	103	50.2		50.0	100
Chromium	25.5		25.0	102	52.7		50.0	105	50.9		50.0	102
Cobalt	25.5		25.0	102	52.0		50.0	104	51.1		50.0	102
Copper	22.7		25.0	91	47.0		50.0	94	45.7		50.0	91
Molybdenum	22.9		25.0	92	47.9		50.0	96	47.1		50.0	94
Nickel	24.4		25.0	97	50.8		50.0	102	49.4		50.0	99
Selenium	24.3		25.0	97	49.9		50.0	100	49.8		50.0	100
Silver	23.4		25.0	93	52.5		50.0	105	51.4		50.0	103
Vanadium	25.8		25.0	103	51.8		50.0	104	51.1		50.0	102
Zinc	23.0		25.0	92	51.9		50.0	104	51.2		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	CCV 440-96469/42 04/05/2013 14:13											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	50.3		50.0	101								
Antimony	52.7		50.0	105								
Arsenic	50.2		50.0	100								
Barium	51.8		50.0	104								
Cadmium	50.5		50.0	101								
Chromium	51.7		50.0	103								
Cobalt	51.3		50.0	103								
Copper	46.7		50.0	93								
Molybdenum	47.3		50.0	95								
Nickel	50.4		50.0	101								
Selenium	49.9		50.0	100								
Silver	52.7		50.0	105								
Vanadium	51.5		50.0	103								
Zinc	51.5		50.0	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-96469/9 04/05/2013 12:36		CCB 440-96469/25 04/05/2013 13:27		CCB 440-96469/34 04/05/2013 13:51		CCB 440-96469/43 04/05/2013 14:15	
		Found	C	Found	C	Found	C	Found	C
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	0.116	J	0.134	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Molybdenum	2.0	2.0	U	0.344	J	0.252	J	0.279	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.255	J	0.312	J	0.272	J	0.265	J
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-96231/1-A

Instrument Code: ICPMS4 Batch No.: 96469

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	1.0	U		6020

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-96231/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	80.0	81.1		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-96469/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.925	J	93	50-150
Arsenic	1.00	0.960	J	96	50-150
Beryllium	0.500	0.478	J	96	50-150
Cadmium	0.500	0.501	J	100	50-150
Barium	1.00	0.988	J	99	50-150
Chromium	1.00	0.949	J	95	50-150
Copper	1.00	0.953	J	95	50-150
Nickel	1.00	0.913	J	91	50-150
Lead	1.00	0.927	J	93	50-150
Selenium	1.00	1.05	J	105	50-150
Cobalt	0.500	0.459	J	92	50-150
Silver	1.00	0.906	J	91	50-150
Thallium	1.00	0.906	J	91	50-150
Zinc	5.00	5.13	J	103	50-150
Molybdenum	1.00	0.918	J	92	50-150
Vanadium	2.00	1.92	J	96	50-150

Lab Sample ID: CRI 440-96469/11 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.88	J	94	50-150
Arsenic	2.00	2.06		103	50-150
Beryllium	1.00	0.963		96	50-150
Cadmium	1.00	1.01		101	50-150
Barium	2.00	2.07		103	50-150
Chromium	2.00	1.94	J	97	50-150
Copper	2.00	1.80	J	90	50-150
Nickel	2.00	1.95	J	97	50-150
Lead	2.00	1.88		94	50-150
Selenium	2.00	2.02		101	50-150
Cobalt	1.00	0.945	J	95	50-150
Silver	2.00	1.85		93	50-150
Thallium	2.00	1.83		92	50-150
Zinc	10.0	10.6	J	106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICSA 440-96469/12 Instrument ID: ICPMS4

Lab File ID: 012ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**-0.0100**	
Aluminum	*100000*	*93410*	*93*
Antimony		*0.270*	
Arsenic		*0.209*	
Barium		*0.207*	
Cadmium		*0.0600*	
Calcium	*100000*	*100228*	*100*
Cerium		*0.0190*	
Chromium		*1.36*	
Cobalt		*0.0460*	
Copper		*0.629*	
Iron	*100000*	*0.0000*	*0*
Lead		*0.0910*	
Magnesium	*100000*	*96239*	*96*
Manganese		*0.169*	
Molybdenum	*2000*	*2167*	*108*
Nickel		*0.703*	
Potassium	*100000*	*100572*	*101*
Selenium		*-0.102*	
Silver		*0.107*	
Sodium	*100000*	*105159*	*105*
Sr		*4.74*	
Thallium		*-0.0060*	
Tin		*0.132*	
Uranium		*0.0030*	
Vanadium		*0.115*	
Zinc		*14.7*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

Lab Sample ID: ICSAB 440-96469/13 Instrument ID: ICPMS4

Lab File ID: 013ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Beryllium	**20.0**	**22.2**	**111**
Aluminum	*100000*	*90602*	*91*
Antimony	*20.0*	*20.5*	*103*
Arsenic	*20.0*	*20.8*	*104*
Barium	*20.0*	*22.2*	*111*
Cadmium	*20.0*	*20.6*	*103*
Calcium	*101000*	*99604*	*99*
Cerium	*20.0*	*22.3*	*112*
Chromium	*20.0*	*20.5*	*103*
Cobalt	*20.0*	*18.9*	*94*
Copper	*20.0*	*18.6*	*93*
Iron	*100000*	*0.0000*	*0*
Lead	*20.0*	*17.9*	*89*
Magnesium	*101000*	*96373*	*96*
Manganese	*20.0*	*21.0*	*105*
Molybdenum	*2020*	*2145*	*106*
Nickel	*20.0*	*21.2*	*106*
Potassium	*101000*	*100183*	*100*
Selenium	*20.0*	*20.0*	*100*
Silver	*20.0*	*19.5*	*98*
Sodium	*101000*	*103556*	*103*
Sr	*20.0*	*27.5*	*137*
Thallium	*20.0*	*17.7*	*88*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*18.9*	*94*
Vanadium	*20.0*	*21.5*	*107*
Zinc	*20.0*	*28.8*	*144*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 440-42596-K-1-B SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22510-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	12		12.9	J	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	25		25.7		0.79		6020
Chromium	1.1	J	10	U	NC		6020
Copper	2.6		10	U	NC		6020
Nickel	2.0	U	10	U	NC		6020
Lead	0.25	J	5.0	U	NC		6020
Selenium	3.7	J	3.26	J	NC		6020
Cobalt	1.0	U	5.0	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	7.0	J	100	U	NC		6020
Molybdenum	40		40.3	J	1.6		6020
Vanadium	18	J	16.3	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/05/2013 End Date: 04/05/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-96433/2 IC	08:43	100		100		100		100		100	
STD1 440-96433/3 IC	08:46	99		98		99		98		101	
STD2 440-96433/4 IC	08:49	100		99		98		98		99	
STD3 440-96433/5 IC	08:52	99		100		100		100		100	
STD4 440-96433/6 IC	08:54	102		100		98		97		101	
ICV 440-96433/7	08:57	106		100		99		100		102	
ICB 440-96433/8	09:05	102		99		98		98		101	
CRI 440-96433/9	09:11	104		100		99		99		102	
CRI 440-96433/10	09:14	102		99		99		98		102	
CCV 440-96433/12	10:33	117		96		96		100		107	
CCB 440-96433/13	10:36	117		96		96		100		105	
ICSA 440-96433/14	10:39	90		92		90		90		100	
ICSAB 440-96433/15	10:41	87		90		89		87		98	
MB 440-96231/1-A	10:47	110		96		94		99		106	
LCS 440-96231/2-A	10:50	109		95		94		99		106	
240-22303-J-2-B MS	10:55	109		99		95		95		105	
240-22303-J-2-C MSD	10:58	112		96		94		96		104	
240-22303-J-2-A PDS	11:00	111		99		95		96		105	
CCV 440-96433/24	11:05			100		97		99		105	
CCB 440-96433/26	11:11	120		98		96		99		104	
240-22510-2	11:35	99		100		95		91		98	
240-22510-3	11:37	108		100		97		98		104	
CCV 440-96433/37	11:40	113		99		98		101		106	
CCB 440-96433/39	11:46	114		100		97		102		106	
240-22510-5	11:49	107		100		93		94		104	
240-22510-8	11:51	117		102		97		97		106	
240-22510-9	11:54	106		100		91		91		101	
440-42596-K-1-B SD	12:02	110		99		96		98		105	
CCV 440-96433/46	12:05	110		96		95		100		107	
CCB 440-96433/47	12:07	115		95		95		100		107	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22510-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/05/2013 End Date: 04/05/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-96469/2 IC	12:18	100		100		100		100		100	
STD1 440-96469/3 IC	12:20	102		99		99		99		100	
STD2 440-96469/4 IC	12:23	102		100		100		99		99	
STD3 440-96469/5 IC	12:26	102		99		99		99		101	
STD4 440-96469/6 IC	12:29	97		98		98		100		99	
ICV 440-96469/8	12:34	98		98		99		98		100	
ICB 440-96469/9	12:36	99		98		99		99		100	
CRI 440-96469/10	12:39	98		98		99		100		99	
CRI 440-96469/11	12:42	101		98		99		100		99	
ICSA 440-96469/12	12:44	77		95		94		90		95	
ICSAB 440-96469/13	12:47	76		94		94		90		94	
MB 440-96231/1-A	13:01	84		95		97		99		100	
LCS 440-96231/2-A	13:04	82		94		97		98		100	
240-22303-J-2-B MS	13:09	82		99		98		98		100	
240-22303-J-2-C MSD	13:12	81		98		96		96		99	
240-22303-J-2-A PDS	13:14	82		97		96		96		99	
CCV 440-96469/24	13:24	90		99		99		100		100	
CCB 440-96469/25	13:27	93		100		99		100		100	
CCV 440-96469/33	13:48	91		105		103		102		100	
CCB 440-96469/34	13:51	97		101		102		101		100	
240-22510-2	13:54	79		101		98		94		94	
240-22510-3	13:57	83		99		98		97		98	
240-22510-5	13:59	81		100		96		94		96	
240-22510-8	14:02	100		103		100		97		100	
240-22510-9	14:05	83		100		94		91		93	
440-42596-K-1-B SD	14:10	93		102		100		99		99	
CCV 440-96469/42	14:13	92		98		98		99		101	
CCB 440-96469/43	14:15	95		99		99		101		101	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW27A-032713	240-22510-2
MRC-MW27B-032713	240-22510-3
MRC-MW24A-032713	240-22510-5

Comments:

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 03/28/2013 14:29 End Date: 03/29/2013 06:54

Lab Sample Id	D/F	Type	Time	Analytes		
				N-No2	NO3	Orthophosphosp
ZZZZZZ			23:31			
ZZZZZZ			23:47			
ZZZZZZ			00:04			
240-22507-K-4 MSD	1	T	00:20	X	X	X
ZZZZZZ			00:36			
CCV 240-79845/39	1		00:53	X	X	X
CCB 240-79845/40	1		01:09	X	X	X
ZZZZZZ			01:26			
ZZZZZZ			01:42			
ZZZZZZ			01:58			
ZZZZZZ			02:15			
ZZZZZZ			02:31			
240-22507-D-8 MS	1	T	02:48	X	X	X
ZZZZZZ			03:04			
ZZZZZZ			03:20			
ZZZZZZ			03:37			
ZZZZZZ			03:53			
CCV 240-79845/51	1		04:10	X	X	X
CCB 240-79845/52	1		04:26	X	X	X
MB 240-79845/53	1	T	04:43	X	X	X
LCS 240-79845/54	1	T	04:59	X	X	X
ZZZZZZ			05:15			
240-22510-3	1	T	05:32	X	X	X
240-22510-5	1	T	05:48	X	X	X
240-22510-2	1	T	06:05	X	X	X
ZZZZZZ			06:21			
CCV 240-79845/60	1		06:37	X	X	X
CCB 240-79845/61	1		06:54	X	X	X

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: LG Batch Start Date: 03/28/2013

Reporting Units: mg/L Analytical Batch No.: 79845

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
27	CCV	21:36	Nitrite as N	2.45	2.50	98	90-110		WCICCCV_00255
			Nitrate as N	2.44	2.50	98	90-110		WCICCCV_00255
			Orthophosphate as P	2.54	2.50	102	90-110		WCICCCV_00255
28	CCB	21:52	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
39	CCV	00:53	Nitrite as N	2.49	2.50	100	90-110		WCICCCV_00255
			Nitrate as N	2.49	2.50	100	90-110		WCICCCV_00255
			Orthophosphate as P	2.68	2.50	107	90-110		WCICCCV_00255
40	CCB	01:09	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
51	CCV	04:10	Nitrite as N	2.43	2.50	97	90-110		WCICCCV_00255
			Nitrate as N	2.50	2.50	100	90-110		WCICCCV_00255
			Orthophosphate as P	2.66	2.50	106	90-110		WCICCCV_00255
52	CCB	04:26	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
60	CCV	06:37	Nitrite as N	2.49	2.50	99	90-110		WCICCCV_00255
			Nitrate as N	2.53	2.50	101	90-110		WCICCCV_00255
			Orthophosphate as P	2.70	2.50	108	90-110		WCICCCV_00255
61	CCB	06:54	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/09/2013 15:27 End Date: 04/09/2013 18:36

Lab Sample Id	D/F	Type	Time	DOC	Analytes
CCV 240-81315/1	1		15:27	X	
CCB 240-81315/2	1		15:38	X	
MB 240-81315/3	1	D	15:49	X	
LCS 240-81315/4	2	D	16:00	X	
240-22510-2	1	D	16:10	X	
240-22510-2 MS	2	D	16:52	X	
240-22510-3	1	D	17:03	X	
240-22510-5	1	D	17:44	X	
CCV 240-81315/9	1		18:25	X	
CCB 240-81315/10	1		18:36	X	

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: TH Batch Start Date: 04/09/2013

Reporting Units: mg/L Analytical Batch No.: 81315

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:27	Dissolved Organic Carbon	26.2	25.0	105	90-110		WC TOC CCV_00127
2	CCB	15:38	Dissolved Organic Carbon	1.0				U	
9	CCV	18:25	Dissolved Organic Carbon	26.6	25.0	106	90-110		WC TOC CCV_00127
10	CCB	18:36	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/03/2013 10:52 End Date: 04/03/2013 16:13

Lab Sample Id	D/F	Type	Time	Analytes: NH3
IC 240-80480/1			10:52	X
IC 240-80480/2			10:52	X
IC 240-80480/3			10:52	X
IC 240-80480/4			10:52	X
ICV 240-80480/5	10		10:52	X
ICB 240-80480/6	1		10:52	X
MB 240-80480/7	1	T	11:01	X
LCS 240-80480/8	10	T	11:06	X
ZZZZZZ			13:36	
ZZZZZZ			13:36	
ZZZZZZ			13:37	
ZZZZZZ			13:37	
ZZZZZZ			13:37	
ZZZZZZ			13:37	
240-22311-F-8 MS	1	T	13:40	X
240-22311-F-8 MSD	1	T	13:40	X
CCV 240-80480/17	1		13:42	X
CCB 240-80480/18	1		15:04	X
ZZZZZZ			15:04	
ZZZZZZ			15:04	
ZZZZZZ			15:04	
ZZZZZZ			15:04	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
ZZZZZZ			15:05	
CCV 240-80480/29	1		15:11	X
CCB 240-80480/30	1		15:58	X
240-22510-2	1	T	15:58	X
240-22510-3	1	T	15:58	X
240-22510-5	1	T	15:58	X
ZZZZZZ			15:58	
CCV 240-80480/35	1		15:59	X
CCB 240-80480/36	1		16:13	X

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: JK Batch Start Date: 04/03/2013

Reporting Units: mg/L Analytical Batch No.: 80480

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	10:52	Ammonia (as N)	9.70	8.93	109	90-110		WCSIMP192-505_00001
6	ICB	10:52	Ammonia (as N)	0.0521				J	
~~17~~	~~CCV~~	~~13:42~~	~~Ammonia (as N)~~	~~2.54~~	~~2.50~~	~~102~~	~~90-110~~		WCNH31000_00021
~~18~~	~~CCB~~	~~15:04~~	~~Ammonia (as N)~~	~~0.0376~~				~~J~~	
29	CCV	15:11	Ammonia (as N)	2.64	2.50	106	90-110		WCNH31000_00021
30	CCB	15:58	Ammonia (as N)	0.0544				J	
35	CCV	15:59	Ammonia (as N)	2.66	2.50	107	90-110		WCNH31000_00021
36	CCB	16:13	Ammonia (as N)	0.0406				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 02/19/2013 16:33 End Date: 02/19/2013 20:19

| Lab Sample Id | D/F | Type | Time | Analytes | | |

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: LG Batch Start Date: 02/19/2013

Reporting Units: mg/L Analytical Batch No.: 75854

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:01	Chloride	51.6	50.0	103	90-110		WCICLCS_00162
			Sulfate	49.5	50.0	99	90-110		WCICLCS_00162

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/09/2013 13:38 End Date: 04/10/2013 01:08

Lab Sample Id	D/F	Type	Time	Analytes
				Cl-
CCV 240-81184/1	1		13:38	X
CCB 240-81184/2	1		13:55	X
MB 240-81184/3	1	T	14:11	X
LCS 240-81184/4	1	T	14:28	X
ZZZZZZ			14:44	
240-22510-2	5	T	15:01	X
240-22510-3	1	T	15:17	X
ZZZZZZ			15:33	
ZZZZZZ			15:50	
240-22510-5	5	T	16:06	X
ZZZZZZ			16:23	
ZZZZZZ			16:39	
CCV 240-81184/13	1		16:55	X
CCB 240-81184/14	1		17:12	X
ZZZZZZ			17:28	
ZZZZZZ			17:45	
ZZZZZZ			18:01	
ZZZZZZ			18:17	
ZZZZZZ			18:34	
ZZZZZZ			18:50	
ZZZZZZ			19:07	
ZZZZZZ			19:23	
ZZZZZZ			19:39	
ZZZZZZ			19:56	
CCV 240-81184/25			20:12	
CCB 240-81184/26			20:29	
ZZZZZZ			20:45	
ZZZZZZ			21:02	
ZZZZZZ			21:18	
ZZZZZZ			21:34	
ZZZZZZ			21:51	
ZZZZZZ			22:07	
ZZZZZZ			22:24	
ZZZZZZ			22:40	
ZZZZZZ			22:56	
ZZZZZZ			23:13	
CCV 240-81184/37			23:29	
CCB 240-81184/38			23:46	
ZZZZZZ			00:02	
ZZZZZZ			00:18	
ZZZZZZ			00:35	

* Cl^- contamination 0.113

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: AM Batch Start Date: 04/09/2013

Reporting Units: mg/L Analytical Batch No.: 81184

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	13:38	Chloride	47.1	50.0	94	90-110		WCICCCV_00259
2	CCB	13:55	Chloride	1.0				U	
13	CCV	16:55	Chloride	46.3	50.0	93	90-110		WCICCCV_00259
14	CCB	17:12	Chloride	0.113				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/10/2013 09:01 End Date: 04/10/2013 15:41

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
RINSE 240-81324/1			09:01		
CCV 240-81324/2	1		09:18	X	X
CCB 240-81324/3	1		09:36	X	X
ZZZZZZ			09:53		
ZZZZZZ			10:11		
ZZZZZZ			10:28		
ZZZZZZ			10:45		
ZZZZZZ			11:03		
LCS 240-81324/9	1	T	11:20	X	X
MB 240-81324/10	1	T	11:38	X	X
240-22510-2	1	T	11:55		X
240-22510-5	1	T	12:12		X
ZZZZZZ			12:30		
CCV 240-81324/14	1		12:47	X	X
CCB 240-81324/15	1		13:05	X	X
ZZZZZZ			13:22		
ZZZZZZ			13:39		
ZZZZZZ			13:57		
ZZZZZZ			14:14		
ZZZZZZ			14:32		
ZZZZZZ			14:49		
ZZZZZZ			15:06		
CCV 240-81324/23			15:24		
CCB 240-81324/24			15:41		

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: AM Batch Start Date: 04/10/2013

Reporting Units: mg/L Analytical Batch No.: 81324

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
2	CCV	09:18	~~Chloride~~	54.0	50.0	~~105~~	90-110		WCICCCV_00259
			Sulfate	53.1	50.0	106	90-110		WCICCCV_00259
3	CCB	09:36	~~Chloride~~	1.0				~~U~~	
			Sulfate	1.0				U	
14	CCV	12:47	~~Chloride~~	54.2	50.0	108	90-110		WCICCCV_00259
			Sulfate	53.5	50.0	107	90-110		WCICCCV_00259
15	CCB	13:05	~~Chloride~~	1.0				~~U~~	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/05/2013 11:12 End Date: 04/06/2013 10:54

Lab Sample Id	D/F	Type	Time	Analytes: SO4
ZZZZZZ			23:18	
ZZZZZZ			23:36	
ZZZZZZ			23:53	
ZZZZZZ			00:10	
ZZZZZZ			00:28	
ZZZZZZ			00:45	
ZZZZZZ			01:03	
ZZZZZZ			01:20	
ZZZZZZ			01:37	
CCV 240-80760/51	1		01:55	X
CCB 240-80760/52	1		02:12	X
MB 240-80760/53	1	T	02:29	X
LCS 240-80760/54	1	T	02:47	X
ZZZZZZ			03:04	
ZZZZZZ			03:22	
ZZZZZZ			03:39	
240-22482-B-11 MS	1	T	03:57	X
ZZZZZZ			04:14	
ZZZZZZ			04:31	
ZZZZZZ			04:49	
240-22510-3	1	T	05:06	X
CCV 240-80760/63	1		05:24	X
CCB 240-80760/64	1		05:41	X
ZZZZZZ			05:58	
ZZZZZZ			06:16	
ZZZZZZ			06:33	
ZZZZZZ			06:51	
ZZZZZZ			07:08	
ZZZZZZ			07:25	
ZZZZZZ			07:43	
ZZZZZZ			08:00	
ZZZZZZ			08:17	
ZZZZZZ			08:35	
CCV 240-80760/75			08:52	
CCB 240-80760/76			09:10	
ZZZZZZ			09:27	
ZZZZZZ			09:44	
ZZZZZZ			10:02	
ZZZZZZ			10:19	
CCV 240-80760/81			10:37	
CCB 240-80760/82			10:54	

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Analyst: LG Batch Start Date: 04/06/2013

Reporting Units: mg/L Analytical Batch No.: 80760

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
51	CCV	01:55	Sulfate	54.1	50.0	108	90-110		WCICCCV_00257
52	CCB	02:12	Sulfate	1.0				U	
63	CCV	05:24	Sulfate	53.6	50.0	107	90-110		WCICCCV_00257
64	CCB	05:41	Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

FORM IX - IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID:	79895	Date: 03/29/2013 08:50					
160.1	MB 240-79895/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID:	79845	Date: 03/28/2013 22:09					
300.0	MB 240-79845/29	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79845/29	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79845/29	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID:	79845	Date: 03/29/2013 04:43					
300.0	MB 240-79845/53	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79845/53	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-79845/53	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID:	80760	Date: 04/06/2013 02:29					
300.0	MB 240-80760/53	Sulfate	1.0	U	mg/L	1.0	1
Batch ID:	81184	Date: 04/09/2013 14:11					
300.0	MB 240-81184/3	Chloride	1.0	U	mg/L	1.0	1
Batch ID:	81324	Date: 04/10/2013 11:38					
~~300.0~~	~~MB 240-81324/10~~	~~Chloride~~	~~0.105~~	~~J~~	mg/L	1.0	1
300.0	MB 240-81324/10	Sulfate	1.0	U	mg/L	1.0	1
Batch ID:	81034	Date: 04/04/2013 14:44					
310.1	MB 240-81034/3	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID:	80480	Date: 04/03/2013 11:01					
350.3	MB 240-80480/7	Ammonia (as N)	0.0752	J	mg/L	0.20	1
Batch ID:	81315	Date: 04/09/2013 15:49					
9060	MB 240-81315/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79895		Date: 03/29/2013 08:50									
						LCS Source: WCWIBBYSOLIDS_00002					
160.1	LCS 240-79895/2	Total Dissolved Solids	194		mg/L	206	94	88-110			
Batch ID: 79845		Date: 03/28/2013 22:25									
						LCS Source: WCICLCS_00172					
300.0	LCS 240-79845/30	Nitrite as N	2.42		mg/L	2.50	97	90-110			
300.0	LCS 240-79845/30	Nitrate as N	2.51		mg/L	2.50	101	90-110			
300.0	LCS 240-79845/30	Orthophosphate as P	2.59		mg/L	2.50	104	90-110			
Batch ID: 79845		Date: 03/29/2013 04:59									
						LCS Source: WCICLCS_00172					
300.0	LCS 240-79845/54	Nitrite as N	2.52		mg/L	2.50	101	90-110			
300.0	LCS 240-79845/54	Nitrate as N	2.61		mg/L	2.50	104	90-110			
300.0	LCS 240-79845/54	Orthophosphate as P	2.76		mg/L	2.50	110	90-110			
Batch ID: 80760		Date: 04/06/2013 02:47									
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80760/54	Sulfate	54.0		mg/L	50.0	108	90-110			
Batch ID: 81184		Date: 04/09/2013 14:28									
						LCS Source: WCICLCS_00175					
300.0	LCS 240-81184/4	Chloride	48.9		mg/L	50.0	98	90-110			
Batch ID: 81324		Date: 04/10/2013 11:20									
						LCS Source: WCICLCS_00175					
300.0	~~LCS 240-81324/~~9	~~Chloride~~	55.1		mg/L	50.0	~~110~~	90-110			
300.0	LCS 240-81324/9	Sulfate	53.7		mg/L	50.0	107	90-110			
Batch ID: 81034		Date: 04/04/2013 14:38									
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-81034/2	Alkalinity	88.7		mg/L	79.5	112	90-127			
Batch ID: 80480		Date: 04/03/2013 11:06									
						LCS Source: WCSIMP192-505_00001					
350.3	LCS 240-80480/8	Ammonia (as N)	9.45		mg/L	8.93	106	85-114			
Batch ID: 81315		Date: 04/09/2013 16:00									
						LCS Source: WC LCS_00006					
9060	LCS 240-81315/4	Dissolved Organic Carbon	52.0		mg/L	48.1	108	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79845	Date: 03/29/2013 02:48										
300.0	240-22507-D-8	Nitrite as N	0.10	U	mg/L						
300.0	240-22507-D-8 MS	Nitrite as N	2.91		mg/L	2.50	117	80-120			
300.0	240-22507-D-8	Nitrate as N	0.10	U	mg/L						
300.0	240-22507-D-8 MS	Nitrate as N	2.72		mg/L	2.50	109	80-120			
300.0	240-22507-D-8	Orthophosphate as P	0.50	U	mg/L						
300.0	240-22507-D-8 MS	Orthophosphate as P	2.67		mg/L	2.50	107	80-120			
Batch ID: 80760	Date: 04/06/2013 03:57										
300.0	240-22482-B-1 1	Sulfate	74		mg/L						
300.0	240-22482-B-1 1 MS	Sulfate	139		mg/L	50.0	131	80-120			F
Batch ID: 81034	Date: 04/04/2013 15:32										
310.1	240-22507-J-4	Alkalinity	100		mg/L						
310.1	240-22507-J-4 MS	Alkalinity	468		mg/L	500	73	10-160			
Batch ID: 80480	Date: 04/03/2013 13:40										
350.3	240-22311-F-8	Ammonia (as N)	0.12	J	mg/L						B
350.3	240-22311-F-8 MS	Ammonia (as N)	2.61		mg/L	2.50	100	75-125			
Batch ID: 81315	Date: 04/09/2013 16:52										
9060	240-22510-2	Dissolved Organic Carbon	2.6		mg/L						
9060	240-22510-2 MS	Dissolved Organic Carbon	30.8		mg/L	25.0	113	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 79845 Date: 03/29/2013 00:20											
300.0	240-22507-K-4 MSD	Nitrite as N	2.91		mg/L	2.50	116	80-120	4	20	
300.0	240-22507-K-4 MSD	Nitrate as N	2.78		mg/L	2.50	109	80-120	1	20	
300.0	240-22507-K-4 MSD	Orthophosphate as P	5.30		mg/L	2.50	212	80-120	5	20	F
Batch ID: 81034 Date: 04/04/2013 15:47											
310.1	240-22507-J-4 MSD	Alkalinity	457		mg/L	500	71	10-160	2	24	
Batch ID: 80480 Date: 04/03/2013 13:40											
350.3	240-22311-F-8 MSD	Ammonia (as N)	2.66		mg/L	2.50	102	75-125	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 03/29/2013 08:50 End Date: 03/29/2013 08:50

Lab Sample Id	D/F	Type	Time	Analytes: TDS
MB 240-79895/1	1	T	08:50	X
LCS 240-79895/2	1	T	08:50	X
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
240-22470-E-1 DU	1	T	08:50	X
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
ZZZZZZ			08:50	
240-22510-2	1	T	08:50	X
240-22510-3	1	T	08:50	X
240-22510-5	1	T	08:50	X
ZZZZZZ			08:50	
ZZZZZZ			08:50	

Prep Types:
T = Total/NA

FORM XIII-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/04/2013 14:30 End Date: 04/04/2013 19:00

Lab Sample Id	D/F	Type	Time	Analytes: Alk
ZZZZZZ			14:30	
LCS 240-81034/2	1	T	14:38	X
MB 240-81034/3	1	T	14:44	X
ZZZZZZ			14:51	
ZZZZZZ			15:02	
ZZZZZZ			15:09	
240-22507-J-4 DU	1	T	15:17	X
240-22507-J-4 MS	1	T	15:32	X
240-22507-J-4 MSD	1	T	15:47	X
ZZZZZZ			15:56	
ZZZZZZ			16:10	
ZZZZZZ			16:14	
ZZZZZZ			16:21	
240-22510-2	1	T	16:27	X
240-22510-3	1	T	16:34	X
240-22510-5	1	T	16:40	X
ZZZZZZ			16:49	
ZZZZZZ			16:59	
ZZZZZZ			17:10	
ZZZZZZ			17:25	
ZZZZZZ			17:41	
ZZZZZZ			17:55	
ZZZZZZ			17:59	
ZZZZZZ			18:12	
ZZZZZZ			18:19	
ZZZZZZ			18:30	
ZZZZZZ			18:38	
ZZZZZZ			18:48	
ZZZZZZ			18:57	
ZZZZZZ			19:00	

Prep Types:
T = Total/NA

FORM XIII-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22510-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	79895	Date: 03/29/2013 08:50						
160.1		240-22470-E-1	Total Dissolved Solids	2700	mg/L			
160.1		240-22470-E-1 DU	Total Dissolved Solids	2860	mg/L	4	20	
Batch ID:	81034	Date: 04/04/2013 15:17						
310.1		240-22507-J-4	Alkalinity	100	mg/L			
310.1		240-22507-J-4 DU	Alkalinity	105	mg/L	0.09	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

VOC CALCULATION	SAMPLE **MRC-MW-96A-032713**		
TARGET ANALYTE	TRICHLOROETHENE		
ANALYTE RESPONSE	167747		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1621774		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.2589		
DILUTION FACTOR (DF)	833.3		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	3329.15	µg/L

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 | Lab Sample ID: 240-22510-8

Matrix: Water | Lab File ID: UXM7234.D

Analysis Method: 8260B | Date Collected: 03/27/2013 09:43

Sample wt/vol: 5(mL) | Date Analyzed: 04/04/2013 15:38

Soil Aliquot Vol: | Dilution Factor: 833.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80572 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	4200	U	4200	92
87-68-3	Hexachlorobutadiene	830	U	830	250
591-78-6	2-Hexanone	4200	U	4200	340
98-82-8	Isopropylbenzene	830	U	830	110
75-09-2	Methylene Chloride	660	J B	830	270
108-10-1	4-Methyl-2-pentanone	4200	U	4200	270
1634-04-4	Methyl tert-butyl ether	830	U	830	140
179601-23-1	m-Xylene & p-Xylene	1700	U	1700	200
91-20-3	Naphthalene	830	U	830	200
104-51-8	n-Butylbenzene	830	U	830	100
103-65-1	n-Propylbenzene	830	U	830	120
95-47-6	o-Xylene	830	U	830	120
99-87-6	p-Isopropyltoluene	830	U	830	100
135-98-8	sec-Butylbenzene	830	U	830	110
100-42-5	Styrene	830	U	830	92
994-05-8	Tert-amyl-methyl ether (TAME)	4200	U	4200	56
75-65-0	tert-Butyl alcohol	17000	U	17000	3200
98-06-6	tert-Butylbenzene	830	U	830	110
630-20-6	1,1,1,2-Tetrachloroethane	830	U	830	190
79-34-5	1,1,2,2-Tetrachloroethane	830	U	830	150
127-18-4	Tetrachloroethene	830	U	830	240
108-88-3	Toluene	830	U	830	110
156-60-5	trans-1,2-Dichloroethene	830	U	830	160
10061-02-6	trans-1,3-Dichloropropene	830	U	830	160
87-61-6	1,2,3-Trichlorobenzene	830	U	830	140
120-82-1	1,2,4-Trichlorobenzene	830	U	830	120
71-55-6	1,1,1-Trichloroethane	830	U	830	180
79-01-6	Trichloroethene	3300		830	140
75-69-4	Trichlorofluoromethane	830	U *	830	170
96-18-4	1,2,3-Trichloropropane	830	U	830	360
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	830	U	830	230
526-73-8	1,2,3-Trimethylbenzene	4200	U	4200	4.9
95-63-6	1,2,4-Trimethylbenzene	830	U	830	100
108-05-4	Vinyl acetate	1700	U	1700	160
75-01-4	Vinyl chloride	830	U	830	180

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20130404-18547.b\UXM7234.D		
Lims ID:	240-22510-B-8	Client ID:	MRC-MW-96A-032713
Inject. Date:	04-Apr-2013 15:38:30	Dil. Factor:	833.3300
Sample Type:	Client		
Sample ID:	240-0018547-012		
Misc. Info.:	M30404A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Purge Vol:	5.000 mL	ALS Bottle#:	12
Lims Batch ID:	80572	Lims Sample ID:	12
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20130404-18547.b\8260_16.m		
Last Update:	05-Apr-2013 12:29:38	Calib Date:	07-Feb-2013 15:20:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20130207-17203.b\UXM6223.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK014		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.702	5.702	0.0	97	1621774	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.394	0.0	93	1008865	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	441949	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.109	5.109	0.0	59	354402	9.01	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	624793	9.37	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	96	1436152	8.67	
$ 8 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	77	452507	7.95	
14 Dichlorodifluoromethane	85		1.646					
15 Chloromethane	50		1.824					
16 Vinyl chloride	62		1.954					9
17 Bromomethane	94		2.298					9
18 Chloroethane	64		2.381					9
20 Trichlorofluoromethane	101		2.654					
24 1,1-Dichloroethene	96		3.152					9
25 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.164					
26 Acetone	43	3.188	3.176	0.012	81	24886	1.16	
28 Carbon disulfide	76		3.354					9
32 Methylene Chloride	84	3.591	3.579	0.012	93	50869	0.7867	
33 2-Methyl-2-propanol	59		3.674					9
35 trans-1,2-Dichloroethene	96		3.840					
36 Methyl tert-butyl ether	73		3.840					
38 1,1-Dichloroethane	63		4.207					
39 Vinyl acetate	86		4.243					
40 Isopropyl ether	87		4.267					
42 Tert-butyl ethyl ether	59		4.587					
45 2-Butanone (MEK)	43		4.706					9
43 cis-1,2-Dichloroethene	96	4.717	4.706	0.011	73	1755826	31.0	
44 2,2-Dichloropropane	77		4.717					
49 Chlorobromomethane	128		4.919					
51 Chloroform	83		4.978					
52 1,1,1-Trichloroethane	97		5.156					
54 1,1-Dichloropropene	75		5.298					

Report Date: 05-Apr-2013 12:29:41 Chrom Revision: 2.0 01-Apr-2013 21:16:10
Data File: \\Ncchrom\ChromData\A3UX16\20130404-18547.b\UXM7234.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
55 Carbon tetrachloride	117		5.310					
57 1,2-Dichloroethane	62		5.476					
58 Benzene	78		5.476					9
59 Tert-amyl methyl ether	73		5.559					
63 Trichloroethene	130	6.022	6.022	0.0	88	167747	4.00	
65 1,2-Dichloropropane	63		6.212					
67 Dibromomethane	93		6.306					
69 Dichlorobromomethane	83		6.437					
71 2-Chloroethyl vinyl ether	63		6.686					
72 cis-1,3-Dichloropropene	75		6.828					
73 4-Methyl-2-pentanone (MIBK)	43		6.947					9
74 Toluene	91		7.137					9
75 trans-1,3-Dichloropropene	75		7.314					
78 1,3-Dichloropropane	76		7.635					
79 Tetrachloroethene	164		7.646					
80 2-Hexanone	43		7.694					
83 Chlorodibromomethane	129		7.848					
85 Ethylene Dibromide	107		7.967					
86 Chlorobenzene	112		8.429					
87 1,1,1,2-Tetrachloroethane	131		8.488					
88 Ethylbenzene	106		8.524					
89 m-Xylene & p-Xylene	106		8.631					
90 Styrene	104		9.010					
91 o-Xylene	106		9.010					
92 Bromoform	173		9.200					
93 Isopropylbenzene	105		9.354					
96 1,1,2,2-Tetrachloroethane	83		9.615					
97 Bromobenzene	156		9.662					
98 1,2,3-Trichloropropane	110		9.674					
100 N-Propylbenzene	120		9.757					
101 2-Chlorotoluene	126		9.840					
103 4-Chlorotoluene	126		9.947					
104 tert-Butylbenzene	119		10.243					
105 1,2,4-Trimethylbenzene	105		10.291					
106 sec-Butylbenzene	105		10.457					
107 1,3-Dichlorobenzene	146		10.575					9
108 4-Isopropyltoluene	119		10.599					
109 1,4-Dichlorobenzene	146		10.659					9
110 1,2,3-Trimethylbenzene	105		10.706					
111 n-Butylbenzene	91		11.002					9
112 1,2-Dichlorobenzene	146		11.026					
113 1,2-Dibromo-3-Chloropropane	157		11.797					
115 1,2,4-Trichlorobenzene	180		12.639					
116 Hexachlorobutadiene	225		12.805					
117 Naphthalene	128		12.888					9
118 1,2,3-Trichlorobenzene	180		13.149					
S 123 Xylenes, Total	106		16.530					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVIS 240-80572/2 Calibration Date: 04/04/2013 11:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.3937		1.00	0.0100	98.8*	50.0
Chloromethane	Ave	0.4718	0.5702	0.1000	1.00	0.0100	20.9	50.0
Vinyl chloride	Ave	0.4464	0.5197		1.00	0.0100	16.4	20.0
Bromomethane	Lin1		0.1697		1.00	0.0100	45.4	50.0
Chloroethane	Ave	0.2699	0.2105		1.00	0.0100	-22.0	50.0
Trichlorofluoromethane	Ave	0.1799	0.3853		1.00	0.0100	114.2*	50.0
Acrolein	Ave	0.0650	0.0572		20.0	0.100	-12.0	50.0
1,1-Dichloroethene	Ave	0.2978	0.2902		1.00	0.0100	-2.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1584		1.00	0.0100	32.4	50.0
Acetone	Ave	0.1320	0.1156		10.0	0.0200	-12.4	50.0
Iodomethane	Ave	0.3309	0.3594		1.00	0.0100	8.6	50.0
Carbon disulfide	Ave	0.9836	0.8444		1.00	0.0100	-14.2	50.0
Acetonitrile	Ave	0.0436	0.0503		20.0	0.100	15.5	50.0
Methyl acetate	Ave	0.3070	0.2711		10.0	0.0200	-11.7	50.0
Methylene Chloride	Ave	0.3987	0.4221		1.00	0.0100	5.9	50.0
tert-Butyl alcohol	Ave	0.0180	0.0159		50.0	0.200	-11.5	50.0
Acrylonitrile	Ave	0.1462	0.1430		20.0	0.0200	-2.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8294		1.00	0.0100	-12.4	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3455		1.00	0.0100	2.8	50.0
Hexane	Ave	0.0703	0.0566		1.00	0.0100	-19.5	20.0
1,1-Dichloroethane	Ave	0.7266	0.7418	0.1000	1.00	0.0100	2.1	50.0
Vinyl acetate	Ave	0.0560	0.0532		2.00	0.0100	-4.9	50.0
2-Butanone	Ave	0.1677	0.1511		10.0	0.0200	-9.9	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3698		1.00	0.0100	5.9	50.0
2,2-Dichloropropane	Ave	0.3066	0.2947		1.00	0.0100	-3.9	50.0
Bromochloromethane	Ave	0.1319	0.1419		1.00	0.0100	7.5	50.0
Tetrahydrofuran	Lin1		0.0890		5.00	0.0100	-21.4	50.0
Chloroform	Ave	0.5879	0.6271		1.00	0.0100	6.7	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3777		1.00	0.0100	2.1	50.0
Cyclohexane	Ave	0.6611	0.6324		1.00	0.0100	-4.4	50.0
1,1-Dichloropropene	Ave	0.4918	0.5245		1.00	0.0100	6.7	50.0
Carbon tetrachloride	Ave	0.2374	0.2611		1.00	0.0100	10.0	50.0
1,2-Dichloroethane	Ave	0.5192	0.5382		1.00	0.0100	3.7	50.0
Benzene	Ave	1.523	1.612		1.00	0.0100	5.9	50.0
Trichloroethene	Ave	0.2589	0.2823		1.00	0.0100	9.0	50.0
Methylcyclohexane	Ave	0.4566	0.4321		1.00	0.0100	-5.4	50.0
1,2-Dichloropropane	Ave	0.3704	0.3966		1.00	0.0100	7.1	20.0
Dibromomethane	Ave	0.1666	0.1735		1.00	0.0100	4.2	50.0
1,4-Dioxane	Qua		0.0028		50.0	0.500	56.2*	50.0
Bromodichloromethane	Ave	0.3405	0.3587		1.00	0.0100	5.4	50.0

FORM VII 8260B

SVOC CALCULATION LIQUIDS	SAMPLE MRC-MW-96A-032713		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	54084		
INTERNAL STANDARD	1,4-DICHLOROBENZENE-D4		
I.S. RESPONSE	238233		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.5004		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1040	ml	
DILUTION FACTOR (DF)	1		
INJECTION VOLUME - VOL inj.	0.001	ml	

$$\frac{\text{(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final}}{\text{(I.S. RESPONSE) X (CAL. RRF) X (vol. initial)}} = 3.4898 \text{ ng/ml or ug/l}$$

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96A-032713 | Lab Sample ID: 240-22510-8

Matrix: Water | Lab File ID: 0404028.D

Analysis Method: 8270D | Date Collected: 03/27/2013 09:43

Extract. Method: 3520C | Date Extracted: 04/02/2013 09:43

Sample wt/vol: 1040(mL) | Date Analyzed: 04/04/2013 18:07

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 80506 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	3.5		0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	64		21-110
4165-62-2	Phenol-d5 (Surr)	69		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

Report Date: 05-Apr-2013 06:24:41 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4AG2\20130404-18527.b\0404028.D		
Lims ID:	240-22510-G-8-A	Client ID:	MRC-MW-96A-032713
Inject. Date:	04-Apr-2013 18:07:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018527-028		
Misc. Info.:	240-22510-G-8-A =240-22510-G-8-A		
Operator:		Instrument ID:	A4AG2
Injection Vol:	1.0 ul	ALS Bottle#:	28
Lims Batch ID:	80506	Lims Sample ID:	28
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20130404-18527.b\8270 ag2.m		
Last Update:	05-Apr-2013 06:24:15	Calib Date:	02-Apr-2013 21:45:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20130402-18465.b\0402027.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK019		

First Level Reviewer: hulat Date: 05-Apr-2013 06:21:36

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.934	5.934	0.0	96	238233	4.00	
* 2 Naphthalene-d8	136	7.047	7.047	0.0	98	960274	4.00	
* 3 Acenaphthene-d10	164	8.544	8.544	0.0	91	569190	4.00	
* 4 Phenanthrene-d10	188	9.812	9.812	0.0	97	965661	4.00	
* 5 Chrysene-d12	240	12.379	12.379	0.0	97	980485	4.00	
* 6 Perylene-d12	264	14.465	14.465	0.0	97	578374	4.00	
$ 7 2-Fluorophenol	112	4.693	4.693	0.0	89	714355	9.89	
$ 8 Phenol-d5	99	5.576	5.576	0.0	98	959697	10.3	
$ 9 Nitrobenzene-d5	82	6.416	6.421	-0.005	86	531949	6.42	
$ 10 2-Fluorobiphenyl (Surr)	172	7.956	7.956	0.0	99	1083962	6.11	
$ 11 2,4,6-Tribromophenol	330	9.213	9.218	-0.005	92	256976	12.1	
$ 12 Terphenyl-d14	244	11.176	11.176	0.0	99	1105595	5.78	
26 1,4-Dioxane	88	2.532	2.533	-0.001	86	54084	1.81	

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: STD6 240-80506/2 Calibration Date: 04/04/2013 08:39

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0404002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4757		9.51	10.0	-4.9	20.0
N-Nitrosodimethylamine	Ave	0.6236	0.6283		10.1	10.0	0.8	20.0
Pyridine	Ave	1.148	1.173		10.2	10.0	2.1	20.0
Benzaldehyde	Ave	0.9861	0.9646	0.0100	19.6	20.0	-2.2	20.0
Phenol	Ave	1.528	1.487	0.8000	9.73	10.0	-2.7	20.0
Aniline	Ave	1.943	1.915		9.85	10.0	-1.5	20.0
Bis(2-chloroethyl)ether	Ave	1.233	1.197	0.7000	9.71	10.0	-2.9	20.0
2-Chlorophenol	Ave	1.246	1.249	0.8000	10.0	10.0	0.2	20.0
1,3-Dichlorobenzene	Ave	1.357	1.352		9.97	10.0	-0.3	20.0
1,4-Dichlorobenzene	Ave	1.378	1.351		9.80	10.0	-2.0	20.0
Benzyl alcohol	Ave	0.8001	0.8187		10.2	10.0	2.3	20.0
1,2-Dichlorobenzene	Ave	1.313	1.283		9.76	10.0	-2.4	20.0
2-Methylphenol	Ave	1.149	1.144	0.7000	9.95	10.0	-0.5	20.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.184		9.53	10.0	-4.7	20.0
Indene	Ave	2.172	2.161		19.9	20.0	-0.5	20.0
3 & 4 Methylphenol	Ave	1.201	1.188		9.89	10.0	-1.1	20.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.8376	0.5000	9.92	10.0	-0.8	20.0
Acetophenone	Ave	1.689	1.651	0.0100	9.77	10.0	-2.3	20.0
Hexachloroethane	Ave	0.5369	0.5389	0.3000	10.0	10.0	0.4	20.0
Nitrobenzene	Ave	0.3193	0.3116	0.2000	9.76	10.0	-2.4	20.0
Isophorone	Ave	0.5793	0.5808	0.4000	10.0	10.0	0.3	20.0
2-Nitrophenol	Ave	0.1527	0.1619	0.1000	10.6	10.0	6.1	20.0
2,4-Dimethylphenol	Ave	0.3096	0.2988	0.2000	9.65	10.0	-3.5	20.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3634	0.3000	9.77	10.0	-2.3	20.0
Benzoic acid	Qua		0.1406		19.4	20.0	-3.2	20.0
2,4-Dichlorophenol	Ave	0.2434	0.2483	0.2000	10.2	10.0	2.0	20.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2700		9.98	10.0	-0.2	20.0
Naphthalene	Ave	0.9352	0.9082	0.7000	9.71	10.0	-2.9	20.0
4-Chloroaniline	Ave	0.3945	0.3954	0.0100	10.0	10.0	0.2	20.0
Hexachlorobutadiene	Ave	0.1430	0.1426	0.0100	9.97	10.0	-0.3	20.0
Caprolactam	Ave	0.0866	0.1019	0.0100	23.5	20.0	17.7	20.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2650	0.2000	10.0	10.0	0.4	20.0
2-Methylnaphthalene	Ave	0.6265	0.6162	0.4000	9.84	10.0	-1.6	20.0
1-Methylnaphthalene	Ave	0.5852	0.5754		9.83	10.0	-1.7	20.0
Hexachlorocyclopentadiene	Lin1		0.2407	0.0500	8.96	10.0	-10.4	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4422	0.0100	9.69	10.0	-3.1	20.0
2,4,6-Trichlorophenol	Ave	0.2852	0.2948	0.2000	10.3	10.0	3.4	20.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3154	0.2000	10.3	10.0	3.2	20.0
1,1'-Biphenyl	Ave	1.319	1.265	0.0100	9.59	10.0	-4.1	20.0
2-Chloronaphthalene	Ave	0.9699	0.9484	0.8000	9.78	10.0	-2.2	20.0

OVG CALCULATION	**SAMPLE MRC-MW27A-032713**		
TARGET ANALYTE	METHANE		
ANALYTE RESPONSE	18722481		
ANALYTE AVERAGE CF RESPONSE	112419		
DILUTION FACTOR (DF)	10		
$\frac{\text{(ANALYTE RESPONSE) X Dilution Factor}}{\text{(AVERAGE ANALYTE RESPONSE)}}$	=	1665.4196	ug/l

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW27A-032713 | Lab Sample ID: 240-22510-2

Matrix: Water | Lab File ID: Z0040131.D

Analysis Method: RSK-175 | Date Collected: 03/27/2013 10:40

Sample wt/vol: 17(mL) | Date Analyzed: 04/01/2013 22:10

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80082 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	1700	B	5.0	0.98

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	86		40-122

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\ZPID\20130401-18424.b\Z0040131.D		
Lims ID:	240-22510-E-2	Client ID:	MRC-MW27A-032713
Inject. Date:	01-Apr-2013 22:10:15	Dil. Factor:	10.0000
Sample Type:	Client		
Sample ID:	240-0018424-031		
Misc. Info.:			
Operator:	402582	Instrument ID:	ZPID
Purge Vol:	1.000 mL	ALS Bottle#:	1
Lims Batch ID:	80082	Lims Sample ID:	31
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20130401-18424.b\RSK175.m		
Last Update:	02-Apr-2013 08:34:41	Calib Date:	18-Jan-2013 16:58:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Column Type:		Column Dia:	
Process Host:	XAWRK027		

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	0.909	0.908	0.001	18722481	166.5	
2 Ethylene						
2		1.408				
4 Ethane						
2	1.686	1.682	0.004	37262	0.3618	
$ 5 1,1,1-Trifluoroethane						
2	2.706	2.702	0.004	85415257	2253.6	

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22510-1

SDG No.:

Lab Sample ID: CCVRT 240-80082/1 Calibration Date: 04/01/2013 15:36

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040101.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	103645		107	116	-7.8	30.0
Ethene	Ave	94091	93192		201	203	-1.0	30.0
Acetylene	Ave	27012	29865		208	188	10.6	30.0
Ethane	Ave	102982	99777		211	218	-3.1	30.0
Propene	Ave	85073	82354		295	305	-3.2	30.0
Propane	Ave	101861	96961		304	319	-4.8	30.0
Propane, 2-methyl	Ave	100175	95340		400	420	-4.8	30.0
1,1,1-Trifluoroethane	Ave	37902	41352		2660	2440	9.1	30.0

PERCHLORATE CALCULATION LIQUIDS	SAMPLE MRC-MW-96B-032713		
TARGET ANALYTE	PERCHLORATE		
ANALYTE RESPONSE	47200320		
INTERNAL STANDARD	18-O PERCHLORATE		
I.S. RESPONSE	164559370		
I.S. CONCENTRATION	10	NG/ML	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.7914		
VOLUME OF FINAL EXTRACT	4	ML	
VOLUME OF INITIAL EXTRACT	4	ML	
DILUTION FACTOR (DF)	1		

$$\frac{\text{(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final}}{\text{(I.S. RESPONSE) X (CAL. RRF) X (vol. initial)}} = 3.6243 \text{ ng/ml or ug/l}$$

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22510-1

SDG No.:

Client Sample ID: MRC-MW-96B-032713 | Lab Sample ID: 240-22510-9

Matrix: Water | Lab File ID: 02APR13-perc-078.d

Analysis Method: 6850 | Date Collected: 03/27/2013 10:54

Extraction Method: Filtration | Date Extracted: 04/02/2013 09:49

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/03/2013 12:19

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 80(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 13496 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	3.6		0.50	0.082

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20130402-3639.b\02APR13-perc-078.d		
Lims ID:	240-22510-D-9-A	Client ID:	MRC-MW-96B-032713
Inject. Date:	03-Apr-2013 12:19:53	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:			
Misc. Info.:			
Operator:		Instrument ID:	A5
Injection Vol:	80.0 ul	ALS Bottle#:	0
Lims Batch ID:	13496	Lims Sample ID:	76
Detector:	MS QQQ		
Method:	\\Sacchrom\ChromData\A5\20130402-3639.b\6850_A5.m		
Last Update:	03-Apr-2013 16:09:53	Calib Date:	02-Apr-2013 18:10:12
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20130402-3639.b\02APR13-perc-012.d		
Limit Group:	LC 6850 ICAL		
Integrator:	Picker		
Column Type:		Column Dia:	
Process Host:	XAWRK022		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
2 Perchlorate									
99.0 > 83.0	9.989	9.975	0.014	1.001	47200320	3.63		623	
101.0 > 85.0	9.986	9.975	0.011	1.000	15810186		2.99(2.30-3.80)	447	
* 18-O Perchlorate									
107.0 > 89.0	9.982	9.982	0.0		164559370	10.0		2600	
109.0 > 91.0	9.979	9.982	-0.003		53300029		3.09(2.30-3.80)	2780	

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22510-1 Analy Batch No.: 13496

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 16:14 Calibration End Date: 04/02/2013 18:10 Calibration ID: 2501

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-13496/3	02APR13-perc-005.d
Level 2	STD02 320-13496/4	02APR13-perc-006.d
Level 3	STD03 320-13496/5	02APR13-perc-007.d
Level 4	STD04 320-13496/6	02APR13-perc-008.d
Level 5	STD05 320-13496/7	02APR13-perc-009.d
Level 6	STD06 320-13496/8	02APR13-perc-010.d
Level 7	STD07 320-13496/9	02APR13-perc-011.d
Level 8	STD08 320-13496/10	02APR13-perc-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.8443 0.7603	0.8106 0.8079	0.7242 0.8387	0.7636	0.7815	Ave		0.7914				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 20, 2013**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION - VOC/SVOC/DISSOLVED GASES/PECHLORATE/METALS/MISCELLANEOUS**
LOCKHEED MARTIN – MRC
SDG 240-22680-1

SAMPLES: 8/Aqueous/VOC

MRC-MW-109B-040113	MRC-MW-69A-040113	MRC-MW-69B-040113
MRC-MW106B/C-040113	MRC-MW107B/C-040113	MRC-MW14A-040113
MRC-MW14B-040113	TB-040113	

4/Aqueous/SVOC

MRC-MW-69A-040113	MRC-MW-69B-040113	MRC-MW14A-040113
MRC-MW14B-040113		

3/Aqueous/PERCHLORATE

MRC-MW-109B-040113	MRC-MW-69A-040113	MRC-MW-69B-040113

4/Aqueous/METALS (Sb, As, Ba, Be, Cd Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, and Zn)

MRC-MW-109B-040113	MRC-MW-69A-040113	MRC-MW14A-040113
MRC-MW107B/C-040113		

1/Aqueous/METALS (Sb, As, Ba, Be, Cd Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Na, Tl, V, Zn, Silicon dioxide) / DISSOLVED GASES / MISCELLANEOUS

MRC-MW14B-040113

Overview

The sample set for Lockheed Martin – MRC, SDG 240-22680-1 consists of seven (7) aqueous environmental samples and one (1) trip blank. The samples were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), dissolved gases, perchlorate, metals, and miscellaneous as outlined above.

The samples were collected by Tetra Tech on April 1, 2013 and analyzed by Test America (North Canton). All analyses were conducted in accordance with SW-846 Methods 8260B, 8270D, 6010C, 6020A, 7470A, 6850, 9060, dissolved gases by method RSK-175, and standard methods 160.1, 300.0, 310.1, and 350.3 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, internal standard recoveries, ICP interference results, laboratory duplicate results, ICP serial dilution results, chromatographic resolution, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major

- The VOC initial calibration and associated continuing calibrations relative response factors (RRFs) were less than the 0.05 quality control limit for tert-butyl alcohol and vinyl acetate on instrument A3UX15. Only non-detected results were reported for tert-butyl alcohol and vinyl acetate and these results were rejected (UR).

Minor

- The VOC continuing calibration %Ds were greater than the quality control limit of 20% and less than 50% for carbon disulfide and naphthalene for instrument A3UX15 on 04/08/13 @ 10:48. The positive carbon disulfide result for sample MRC-MW106B/C-040113 was qualified as estimated. No action was taken on the nondetected results in the affected samples.

- The following compound was detected in the method blank at the maximum concentration indicated below:

Compound	Concentration	Action Level
Methane	0.107 ug/L	0.535 ug/L

An action level of 5 times the maximum contaminant concentration was established for methane to evaluate laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken on this basis because the methane result was greater than the action level.

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Silver[(1)]	0.260 ug/L	1.3 ug/L
Molybdenum[(2)]	0.234 ug/L	1.17 ug/L
Calcium[(3)]	206 ug/L	1030 ug/L
Magnesium[(3)]	43 ug/L	215 ug/L
Manganese[(3)]	0.631 ug/L	3.16 ug/L
Ammonia[(4)]	0.0368 ug/L	0.184 ug/L

(1) Maximum concentration present in CCB 98883/57 affecting all samples.
(2) Maximum concentration present in CCB 99022/14 affecting all samples.
(3) Maximum concentration present in MB 81088/1-A affecting all samples.
(4) Maximum concentration present in ICB on 4/05/13 @ 12:16 affecting sample MRC-MW14B-040113.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for silver and molybenum were qualified (B) as a result of laboratory blank contamination.

- The ICP serial dilution percent difference was > 10% quality control limit (sample result > 50X IDL) for barium. The positive results reported for barium were qualified as estimated, (J).

- A nitrite-N laboratory control sample (LCS) associated with sample MRC-MW14B-040113 had a percent recovery less than the quality control limit. The nondetected nitrite-N result has been qualified as estimated (UJ).

- Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Notes

Samples MRC-MW-109B-040113 and MRC-MW14B-040113 were diluted for VOCs due to concentrations greater than the linear calibration range of the instrument. This accounts for the elevated detection limits for the nondetected compounds.

Sample MRC-MW14B-040113 was diluted due to a 1,4-dioxane concentration greater than the linear calibration range of the instrument.

The VOC continuing calibration %Ds were greater than the quality control limit of 20% and less than 50% for carbon disulfide, methylene chloride, cis-1,3-dichloropropene, trans-1,3-dichloropropene, chlorodibromomethane, bromoform, 1,2-dibromo-3-chloropropane, and naphthalene for instrument A3UX15 on 04/09/13 @ 10:18. No action was taken on this basis because only nondetected results were reported for the aforementioned compounds in the affected samples.

The batch VOC matrix spike / matrix spike duplicate (MS/MSD) had zero percent recoveries for 2-chloroethyl vinyl ether in the MS and MSD. No action was taken on this basis because the MS/MSD was not performed on a Tetra Tech sample.

The metals MS/MSD performed on sample MRC-MW14B-040113 had percent recoveries for barium, nickel, and zinc greater than the quality control limit and molybdenum less than the quality control limit in the MSD. No action was taken on this basis because the post digestion, MS and LCS recoveries were acceptable.

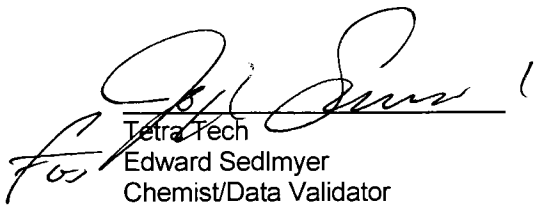
The batch orthophosphate MS had percent recovery greater than the quality control limit. No action was taken on this basis because the MS was not performed on a Tetra Tech sample.

Executive Summary

Laboratory Performance: Two VOC compounds had RRF noncompliances resulting in the rejection of data. Blank contamination resulted in the qualification of data for the metals fraction. A VOC CCAL %D noncompliance resulted in the qualification of one VOC result. A nitrite LCS had a low percent recovery resulting in qualification of the data.

Other Factors Affecting Data Quality: The ICP serial dilution percent difference was > 10% quality control limit (sample result > 50X IDL) for barium. Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.



Tetra Tech
Edward Sedlmyer
Chemist/Data Validator



Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 04795	NSAMPLE	MRC-MW106B/C-040113			MRC-MW107B/C-040113			MRC-MW-109B-040113			MRC-MW14A-040113		
SDG: 240-22680-1	LAB_ID	240-22680-4			240-22680-5			240-22680-6			240-22680-3		
FRACTION: OV	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.77	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.73	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.6	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.93	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.5	U		0.32	J	P
1,1-DICHLOROETHENE		0.39	J	P	0.19	U		0.63	U		0.35	J	P
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.43	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.57	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		1.4	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.39	J	P	0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.5	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.4	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		2.2	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.8	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.43	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		1.2	J	P	0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.6	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.47	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.53	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.43	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.43	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		1.9	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		3.3	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.37	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		1.4	U		0.41	U	
2-NITROPROPANE								3.6	NJ	Z1			
4-CHLOROTOLUENE		0.18	U		0.18	U		0.6	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.4	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		1.1	U		0.32	U	
ACETONE		1.1	U		1.1	U		3.7	U		1.1	U	
BENZENE		0.13	U		0.13	U		37			0.13	U	
BENZENE, 1,2,3,5-TETRAMETHYL-								3.5	NJ	Z1			
BROMOBENZENE		0.13	U		0.13	U		0.43	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.97	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.5	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		2.1	U		0.64	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW14B-040113			MRC-MW-69A-040113			MRC-MW-69B-040113			TB-040113		
SDG: 240-22680-1	LAB_ID	240-22680-2			240-22680-7			240-22680-8			240-22680-1		
FRACTION: OV	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		45	J	P	0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		540			0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.59	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		41	U		0.41	U		0.41	U		0.41	U	
2-NITROPROPANE													
4-CHLOROTOLUENE		18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		32	U		0.32	U		0.32	U		0.32	U	
ACETONE		110	U		1.1	U		1.1	U		1.1	U	
BENZENE		36	J	P	0.13	U		0.13	U		0.13	U	
BENZENE, 1,2,3,5-TETRAMETHYL-													
BROMOBENZENE		13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		64	U		0.64	U		0.64	U		0.64	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW106B/C-040113			MRC-MW107B/C-040113			MRC-MW-109B-040113			MRC-MW14A-040113		
SDG: 240-22680-1	LAB_ID	240-22680-4			240-22680-5			240-22680-6			240-22680-3		
FRACTION: OV	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMOMETHANE		0.41	U		0.41	U		1.4	U		0.41	U	
BUTANE, 2,2-DIMETHYL-								22	NJ	Z1			
BUTANE, 2-METHYL-								88	NJ	Z1			
CARBON DISULFIDE		0.4	J	CP	0.13	U		0.43	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.43	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.5	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.6	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.97	U		0.29	U	
CHLOROFORM		0.36	J	P	0.16	U		0.53	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		1	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.4	J	P	0.17	U		43			1.9		
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.47	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.93	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		1	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.37	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.57	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		1	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.47	J	P	0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.8	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		4.8			0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		1.1	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.8	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.4	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.47	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		1.7	J	P	0.14	U	
PENTANE								4.6	NJ	Z1			
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.43	U		0.13	U	
STYRENE		0.11	U		0.11	U		0.37	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.22	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.43	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	13	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.97	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.43	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		1.7	J	P	0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		4			0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW14B-040113			MRC-MW-69A-040113			MRC-MW-69B-040113			TB-040113		
SDG: 240-22680-1	LAB_ID	240-22680-2			240-22680-7			240-22680-8			240-22680-1		
FRACTION: OV	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMOMETHANE		41	U		0.41	U		0.41	U		0.41	U	
BUTANE, 2,2-DIMETHYL-													
BUTANE, 2-METHYL-													
CARBON DISULFIDE		13	U		0.13	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		30	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		54	J	P	0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		150	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		30	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		14	U		0.14	U		0.14	U		0.14	U	
PENTANE													
SEC-BUTYLBENZENE		13	U		0.13	U		0.13	U		0.13	U	
STYRENE		11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		6.7	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		390	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		19	U		0.19	U		0.19	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW106B/C-040113			MRC-MW107B/C-040113			MRC-MW-109B-040113			MRC-MW14A-040113		
SDG: 240-22680-1	LAB_ID	240-22680-4			240-22680-5			240-22680-6			240-22680-3		
FRACTION: OV	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.63	U		0.19	U	
TRICHLOROETHENE		2.7			0.17	U		15			1.1		
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.7	U		0.21	U	
UNKNOWN								11	NJ	Z1			
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.63	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.73	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW14B-040113			MRC-MW-69A-040113			MRC-MW-69B-040113			TB-040113		
SDG: 240-22680-1	LAB_ID	240-22680-2			240-22680-7			240-22680-8			240-22680-1		
FRACTION: OV	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,3-DICHLOROPROPENE		19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		2300			0.17	U		0.17	U		0.17	U	
TRICHLOROFLUOROMETHANE		21	U		0.21	U		0.21	U		0.21	U	
UNKNOWN													
VINYL ACETATE		19	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW14A-040113			MRC-MW14B-040113			MRC-MW-69A-040113			MRC-MW-69B-040113		
SDG: 240-22680-1	LAB_ID	240-22680-3			240-22680-2			240-22680-7			240-22680-8		
FRACTION: OS	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	U		270			1.1			0.49	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW14B-040113		
SDG: 240-22680-1	LAB_ID	240-22680-2		
FRACTION: OVG	SAMP_DATE	4/1/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ETHANE		0.1	U	
ETHENE		0.37	U	
METHANE		35		

PROJ_NO: 04795	NSAMPLE	MRC-MW107B/C-040113			MRC-MW-109B-040113			MRC-MW14A-040113			MRC-MW14B-040113		
SDG: 240-22680-1	LAB_ID	240-22680-5			240-22680-6			240-22680-3			240-22680-2		
FRACTION: M	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.96	J	P	0.38	J	P	0.6	U	
ARSENIC		0.9	U		0.9	U		0.9	U		1.8	U	
BARIUM		62	J	I	190	J	I	55	J	I	130	J	I
BERYLLIUM		0.1	U		1.9			0.1	U		0.4	J	P
CADMIUM		0.11	J	P	0.48	J	P	0.1	J	P	0.2	U	
CALCIUM											19000		
CHROMIUM		0.9	U		0.9	U		0.9	U		1.8	U	
COBALT		8.7			180			17			77		
COPPER		32			6.4			1.1	J	P	3.5	J	P
IRON											37000		
LEAD		0.24	J	P	0.22	J	P	0.26	J	P	2		
MAGNESIUM											8100		
MANGANESE											2100		
MERCURY		0.1	U		0.1	U		0.1	U		0.12	U	
MOLYBDENUM		0.2	U		0.2	U		0.23	J	B	0.79	J	B
NICKEL		21			280			19			130		
POTASSIUM											3800	J	P
SELENIUM		0.5	U		0.5	U		4.3	J	P	1	U	
SILICON DIOXIDE											21000		
SILVER		0.1	U		0.1	U		0.24	J	B	0.58	J	B
SODIUM											43000		
THALLIUM		0.2	U		0.2	U		0.2	U		0.4	U	
VANADIUM		0.8	U		0.81	J	P	0.8	U		3.9	J	P
ZINC		2500			1000			17	J	P	180		

PROJ_NO: 04795	NSAMPLE	MRC-MW-69A-040113		
SDG: 240-22680-1	LAB_ID	240-22680-7		
FRACTION: M	SAMP_DATE	4/1/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			

PARAMETER	RESULT	VQL	QLCD
ANTIMONY	0.8	J	P
ARSENIC	0.9	U	
BARIUM	300	J	I
BERYLLIUM	0.73	J	P
CADMIUM	1.2		
CALCIUM			
CHROMIUM	1.5	J	P
COBALT	220		
COPPER	2.3		
IRON			
LEAD	5		
MAGNESIUM			
MANGANESE			
MERCURY	0.1	U	
MOLYBDENUM	0.2	U	
NICKEL	350		
POTASSIUM			
SELENIUM	0.5	U	
SILICON DIOXIDE			
SILVER	0.1	U	
SODIUM			
THALLIUM	0.2	U	
VANADIUM	1.9	J	P
ZINC	670		

PROJ_NO: 04795	NSAMPLE	MRC-MW-109B-040113			MRC-MW14B-040113			MRC-MW14B-040113RE2			MRC-MW-69A-040113		
SDG: 240-22680-1	LAB_ID	240-22680-6			240-22680-2			240-22680-2			240-22680-7		
FRACTION: MISC	SAMP_DATE	4/1/2013			4/1/2013			4/1/2013			4/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			MG/L			MG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY					16								
AMMONIA-N					0.32								
CHLORIDE					120								
DISSOLVED ORGANIC CARBON					2.1								
NITRATE-N					0.023	U							
NITRITE-N								0.012	UJ	E			
ORTHOPHOSPHATE-P					0.044	U							
PERCHLORATE		0.33	J	P							0.082	U	
SULFATE					74								
TOTAL DISSOLVED SOLIDS					330								

PROJ_NO: 04795	NSAMPLE	MRC-MW-69B-040113		
SDG: 240-22680-1	LAB_ID	240-22680-8		
FRACTION: MISC	SAMP_DATE	4/1/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALKALINITY				
AMMONIA-N				
CHLORIDE				
DISSOLVED ORGANIC CARBON				
NITRATE-N				
NITRITE-N				
ORTHOPHOSPHATE-P				
PERCHLORATE		0.082	U	
SULFATE				
TOTAL DISSOLVED SOLIDS				

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-109B-040113 | Lab Sample ID: 240-22680-6

Matrix: Water | Lab File ID: UXC0520.D

Analysis Method: 8260B | Date Collected: 04/01/2013 11:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 20:27

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	17	U	17	3.7
71-43-2	Benzene	37		3.3	0.43
108-86-1	Bromobenzene	3.3	U	3.3	0.43
74-97-5	Bromochloromethane	3.3	U	3.3	0.97
75-27-4	Bromodichloromethane	3.3	U	3.3	0.50
75-25-2	Bromoform	3.3	U	3.3	2.1
74-83-9	Bromomethane	3.3	U	3.3	1.4
78-93-3	2-Butanone	17	U	17	1.9
75-15-0	Carbon disulfide	3.3	U	3.3	0.43
56-23-5	Carbon tetrachloride	3.3	U	3.3	0.43
108-90-7	Chlorobenzene	3.3	U	3.3	0.50
75-00-3	Chloroethane	3.3	U	3.3	0.97
110-75-8	2-Chloroethyl vinyl ether	33	U	33	3.3
67-66-3	Chloroform	3.3	U	3.3	0.53
74-87-3	Chloromethane	3.3	U	3.3	1.0
95-49-8	2-Chlorotoluene	3.3	U	3.3	0.37
106-43-4	4-Chlorotoluene	3.3	U	3.3	0.60
156-59-2	cis-1,2-Dichloroethene	43		3.3	0.57
10061-01-5	cis-1,3-Dichloropropene	3.3	U	3.3	0.47
124-48-1	Dibromochloromethane	3.3	U	3.3	0.60
96-12-8	1,2-Dibromo-3-Chloropropane	17	U	17	2.2
106-93-4	1,2-Dibromoethane	3.3	U	3.3	0.80
74-95-3	Dibromomethane	3.3	U	3.3	0.93
95-50-1	1,2-Dichlorobenzene	3.3	U	3.3	0.43
541-73-1	1,3-Dichlorobenzene	3.3	U	3.3	0.47
106-46-7	1,4-Dichlorobenzene	3.3	U	3.3	0.43
75-71-8	Dichlorodifluoromethane	3.3	U	3.3	1.0
75-34-3	1,1-Dichloroethane	3.3	U	3.3	0.50
107-06-2	1,2-Dichloroethane	1.2	J	3.3	0.73
75-35-4	1,1-Dichloroethene	3.3	U	3.3	0.63
78-87-5	1,2-Dichloropropane	3.3	U	3.3	0.60
142-28-9	1,3-Dichloropropane	3.3	U	3.3	0.53
594-20-7	2,2-Dichloropropane	3.3	U	3.3	0.43
563-58-6	1,1-Dichloropropene	3.3	U	3.3	0.43
108-20-3	Diisopropyl ether	17	U	17	5.0
100-41-4	Ethylbenzene	3.3	U	3.3	0.57

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-109B-040113 | Lab Sample ID: 240-22680-6

Matrix: Water | Lab File ID: UXC0520.D

Analysis Method: 8260B | Date Collected: 04/01/2013 11:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 20:27

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	17	U	17	0.37
87-68-3	Hexachlorobutadiene	3.3	U	3.3	1.0
591-78-6	2-Hexanone	17	U	17	1.4
98-82-8	Isopropylbenzene	0.47	J	3.3	0.43
75-09-2	Methylene Chloride	3.3	U	3.3	1.1
108-10-1	4-Methyl-2-pentanone	17	U	17	1.1
1634-04-4	Methyl tert-butyl ether	4.8		3.3	0.57
179601-23-1	m-Xylene & p-Xylene	6.7	U	6.7	0.80
91-20-3	Naphthalene	3.3	U	3.3	0.80
104-51-8	n-Butylbenzene	3.3	U	3.3	0.40
103-65-1	n-Propylbenzene	3.3	U	3.3	0.47
95-47-6	o-Xylene	1.7	J	3.3	0.47
99-87-6	p-Isopropyltoluene	3.3	U	3.3	0.40
135-98-8	sec-Butylbenzene	3.3	U	3.3	0.43
100-42-5	Styrene	3.3	U	3.3	0.37
994-05-8	Tert-amyl-methyl ether (TAME)	17	U	17	0.22
75-65-0	tert-Butyl alcohol	67	U	67	13
98-06-6	tert-Butylbenzene	3.3	U	3.3	0.43
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	3.3	0.77
79-34-5	1,1,2,2-Tetrachloroethane	3.3	U	3.3	0.60
127-18-4	Tetrachloroethene	3.3	U	3.3	0.97
108-88-3	Toluene	3.3	U	3.3	0.43
156-60-5	trans-1,2-Dichloroethene	4.0		3.3	0.63
10061-02-6	trans-1,3-Dichloropropene	3.3	U	3.3	0.63
87-61-6	1,2,3-Trichlorobenzene	3.3	U	3.3	0.57
120-82-1	1,2,4-Trichlorobenzene	3.3	U	3.3	0.50
71-55-6	1,1,1-Trichloroethane	3.3	U	3.3	0.73
79-01-6	Trichloroethene	15		3.3	0.57
75-69-4	Trichlorofluoromethane	3.3	U	3.3	0.70
96-18-4	1,2,3-Trichloropropane	3.3	U	3.3	1.4
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	3.3	U	3.3	0.93
526-73-8	1,2,3-Trimethylbenzene	0.39	J	17	0.020
95-63-6	1,2,4-Trimethylbenzene	3.3	U	3.3	0.40
108-05-4	Vinyl acetate	6.7	U	6.7	0.63
75-01-4	Vinyl chloride	3.3	U	3.3	0.73

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-109B-040113 | Lab Sample ID: 240-22680-6

Matrix: Water | Lab File ID: UXC0520.D

Analysis Method: 8260B | Date Collected: 04/01/2013 11:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 20:27

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Tota1	1.7	J	6.7	0.93

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-109B-040113 Lab Sample ID: 240-22680-6

Matrix: Water Lab File ID: UXC0520.D

Analysis Method: 8260B Date Collected: 04/01/2013 11:05

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 20:27

Soil Aliquot Vol: Dilution Factor: 3.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

Number TICs Found: 6 TIC Result Total: 132.7

CAS NO.	COMPOUND NAME	RT	RESULT	Q
78-78-4	Butane, 2-methyl-	1.72	88	T J N
109-66-0	Pentane	1.91	4.6	T J N
75-83-2	Butane, 2,2-dimethyl-	2.27	22	T J N
	Unknown	2.65	11	T J
79-46-9	2-Nitropropane	5.58	3.6	J
527-53-7	Benzene, 1,2,3,5-tetramethyl-	10.24	3.5	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69A-040113 Lab Sample ID: 240-22680-7

Matrix: Water Lab File ID: UXC0559.D

Analysis Method: 8260B Date Collected: 04/01/2013 13:17

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 12:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69A-040113 | Lab Sample ID: 240-22680-7

Matrix: Water | Lab File ID: UXC0559.D

Analysis Method: 8260B | Date Collected: 04/01/2013 13:17

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 12:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69A-040113 | Lab Sample ID: 240-22680-7

Matrix: Water | Lab File ID: UXC0559.D

Analysis Method: 8260B | Date Collected: 04/01/2013 13:17

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 12:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	86		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69A-040113 Lab Sample ID: 240-22680-7

Matrix: Water Lab File ID: UXC0559.D

Analysis Method: 8260B Date Collected: 04/01/2013 13:17

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 12:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69B-040113 Lab Sample ID: 240-22680-8

Matrix: Water Lab File ID: UXC0560.D

Analysis Method: 8260B Date Collected: 04/01/2013 14:34

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 12:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69B-040113 | Lab Sample ID: 240-22680-8

Matrix: Water | Lab File ID: UXC0560.D

Analysis Method: 8260B | Date Collected: 04/01/2013 14:34

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 12:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69B-040113 | Lab Sample ID: 240-22680-8

Matrix: Water | Lab File ID: UXC0560.D

Analysis Method: 8260B | Date Collected: 04/01/2013 14:34

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 12:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	91		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69B-040113 Lab Sample ID: 240-22680-8

Matrix: Water Lab File ID: UXC0560.D

Analysis Method: 8260B Date Collected: 04/01/2013 14:34

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 12:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW106B/C-040113 Lab Sample ID: 240-22680-4

Matrix: Water Lab File ID: UXC0518.D

Analysis Method: 8260B Date Collected: 04/01/2013 13:35

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 19:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	0.40	J	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	0.36	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.40	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.39	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW106B/C-040113 Lab Sample ID: 240-22680-4

Matrix: Water Lab File ID: UXC0518.D

Analysis Method: 8260B Date Collected: 04/01/2013 13:35

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 19:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	2.7		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW106B/C-040113 Lab Sample ID: 240-22680-4

Matrix: Water Lab File ID: UXC0518.D

Analysis Method: 8260B Date Collected: 04/01/2013 13:35

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 19:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW106B/C-040113 | Lab Sample ID: 240-22680-4

Matrix: Water | Lab File ID: UXC0518.D

Analysis Method: 8260B | Date Collected: 04/01/2013 13:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 19:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW107B/C-040113 | Lab Sample ID: 240-22680-5

Matrix: Water | Lab File ID: UXC0519.D

Analysis Method: 8260B | Date Collected: 04/01/2013 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 20:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW107B/C-040113 | Lab Sample ID: 240-22680-5

Matrix: Water | Lab File ID: UXC0519.D

Analysis Method: 8260B | Date Collected: 04/01/2013 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 20:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW107B/C-040113 Lab Sample ID: 240-22680-5

Matrix: Water Lab File ID: UXC0519.D

Analysis Method: 8260B Date Collected: 04/01/2013 14:30

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 20:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW107B/C-040113 Lab Sample ID: 240-22680-5

Matrix: Water Lab File ID: UXC0519.D

Analysis Method: 8260B Date Collected: 04/01/2013 14:30

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 20:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14A-040113 | Lab Sample ID: 240-22680-3

Matrix: Water | Lab File ID: UXC0517.D

Analysis Method: 8260B | Date Collected: 04/01/2013 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 19:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.9		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	0.32	J	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.35	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14A-040113 | Lab Sample ID: 240-22680-3

Matrix: Water | Lab File ID: UXC0517.D

Analysis Method: 8260B | Date Collected: 04/01/2013 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 19:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.1		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14A-040113 | Lab Sample ID: 240-22680-3

Matrix: Water | Lab File ID: UXC0517.D

Analysis Method: 8260B | Date Collected: 04/01/2013 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 19:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14A-040113 Lab Sample ID: 240-22680-3

Matrix: Water Lab File ID: UXC0517.D

Analysis Method: 8260B Date Collected: 04/01/2013 12:35

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 19:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14B-040113 | Lab Sample ID: 240-22680-2

Matrix: Water | Lab File ID: UXC0516.D

Analysis Method: 8260B | Date Collected: 04/01/2013 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 18:58

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	500	U	500	110
71-43-2	Benzene	36	J	100	13
108-86-1	Bromobenzene	100	U	100	13
74-97-5	Bromochloromethane	100	U	100	29
75-27-4	Bromodichloromethane	100	U	100	15
75-25-2	Bromoform	100	U	100	64
74-83-9	Bromomethane	100	U	100	41
78-93-3	2-Butanone	500	U	500	57
75-15-0	Carbon disulfide	100	U	100	13
56-23-5	Carbon tetrachloride	100	U	100	13
108-90-7	Chlorobenzene	100	U	100	15
75-00-3	Chloroethane	100	U	100	29
110-75-8	2-Chloroethyl vinyl ether	1000	U	1000	99
67-66-3	Chloroform	100	U	100	16
74-87-3	Chloromethane	100	U	100	30
95-49-8	2-Chlorotoluene	100	U	100	11
106-43-4	4-Chlorotoluene	100	U	100	18
156-59-2	cis-1,2-Dichloroethene	54	J	100	17
10061-01-5	cis-1,3-Dichloropropene	100	U	100	14
124-48-1	Dibromochloromethane	100	U	100	18
96-12-8	1,2-Dibromo-3-Chloropropane	500	U	500	67
106-93-4	1,2-Dibromoethane	100	U	100	24
74-95-3	Dibromomethane	100	U	100	28
95-50-1	1,2-Dichlorobenzene	100	U	100	13
541-73-1	1,3-Dichlorobenzene	100	U	100	14
106-46-7	1,4-Dichlorobenzene	100	U	100	13
75-71-8	Dichlorodifluoromethane	100	U	100	31
75-34-3	1,1-Dichloroethane	45	J	100	15
107-06-2	1,2-Dichloroethane	100	U	100	22
75-35-4	1,1-Dichloroethene	540		100	19
78-87-5	1,2-Dichloropropane	100	U	100	18
142-28-9	1,3-Dichloropropane	100	U	100	16
594-20-7	2,2-Dichloropropane	100	U	100	13
563-58-6	1,1-Dichloropropene	100	U	100	13
108-20-3	Diisopropyl ether	500	U	500	150
100-41-4	Ethylbenzene	100	U	100	17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14B-040113 | Lab Sample ID: 240-22680-2

Matrix: Water | Lab File ID: UXC0516.D

Analysis Method: 8260B | Date Collected: 04/01/2013 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 18:58

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	500	U	500	11
87-68-3	Hexachlorobutadiene	100	U	100	30
591-78-6	2-Hexanone	500	U	500	41
98-82-8	Isopropylbenzene	100	U	100	13
75-09-2	Methylene Chloride	100	U	100	33
108-10-1	4-Methyl-2-pentanone	500	U	500	32
1634-04-4	Methyl tert-butyl ether	100	U	100	17
179601-23-1	m-Xylene & p-Xylene	200	U	200	24
91-20-3	Naphthalene	100	U	100	24
104-51-8	n-Butylbenzene	100	U	100	12
103-65-1	n-Propylbenzene	100	U	100	14
95-47-6	o-Xylene	100	U	100	14
99-87-6	p-Isopropyltoluene	100	U	100	12
135-98-8	sec-Butylbenzene	100	U	100	13
100-42-5	Styrene	100	U	100	11
994-05-8	Tert-amyl-methyl ether (TAME)	500	U	500	6.7
75-65-0	tert-Butyl alcohol	2000	U	2000	390
98-06-6	tert-Butylbenzene	100	U	100	13
630-20-6	1,1,1,2-Tetrachloroethane	100	U	100	23
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	18
127-18-4	Tetrachloroethene	100	U	100	29
108-88-3	Toluene	100	U	100	13
156-60-5	trans-1,2-Dichloroethene	100	U	100	19
10061-02-6	trans-1,3-Dichloropropene	100	U	100	19
87-61-6	1,2,3-Trichlorobenzene	100	U	100	17
120-82-1	1,2,4-Trichlorobenzene	100	U	100	15
71-55-6	1,1,1-Trichloroethane	100	U	100	22
79-01-6	Trichloroethene	2300		100	17
75-69-4	Trichlorofluoromethane	100	U	100	21
96-18-4	1,2,3-Trichloropropane	100	U	100	43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	100	U	100	28
526-73-8	1,2,3-Trimethylbenzene	500	U	500	0.59
95-63-6	1,2,4-Trimethylbenzene	100	U	100	12
108-05-4	Vinyl acetate	200	U	200	19
75-01-4	Vinyl chloride	100	U	100	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14B-040113 | Lab Sample ID: 240-22680-2

Matrix: Water | Lab File ID: UXC0516.D

Analysis Method: 8260B | Date Collected: 04/01/2013 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 18:58

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	200	U	200	28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	95		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Matrix: Water Lab File ID: UXC0516.D

Analysis Method: 8260B Date Collected: 04/01/2013 10:55

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 18:58

Soil Aliquot Vol: Dilution Factor: 100

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: TB-040113 Lab Sample ID: 240-22680-1

Matrix: Water Lab File ID: UXC0515.D

Analysis Method: 8260B Date Collected: 04/01/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 18:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: TB-040113 | Lab Sample ID: 240-22680-1

Matrix: Water | Lab File ID: UXC0515.D

Analysis Method: 8260B | Date Collected: 04/01/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 18:36

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: TB-040113 Lab Sample ID: 240-22680-1

Matrix: Water Lab File ID: UXC0515.D

Analysis Method: 8260B Date Collected: 04/01/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 18:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: TB-040113 Lab Sample ID: 240-22680-1

Matrix: Water Lab File ID: UXC0515.D

Analysis Method: 8260B Date Collected: 04/01/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 18:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69A-040113 | Lab Sample ID: 240-22680-7

Matrix: Water | Lab File ID: 30412031.D

Analysis Method: 8270D | Date Collected: 04/01/2013 13:17

Extract. Method: 3520C | Date Extracted: 04/05/2013 09:39

Sample wt/vol: 1050(mL) | Date Analyzed: 04/12/2013 22:42

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81701 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.1		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	62		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	75		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	63		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69B-040113 | Lab Sample ID: 240-22680-8

Matrix: Water | Lab File ID: 30410030.D

Analysis Method: 8270D | Date Collected: 04/01/2013 14:34

Extract. Method: 3520C | Date Extracted: 04/05/2013 09:39

Sample wt/vol: 1000(mL) | Date Analyzed: 04/10/2013 18:38

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81316 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	58		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	52		21-110
1718-51-0	Terphenyl-d14 (Surr)	68		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14A-040113 | Lab Sample ID: 240-22680-3

Matrix: Water | Lab File ID: 30410026.D

Analysis Method: 8270D | Date Collected: 04/01/2013 12:35

Extract. Method: 3520C | Date Extracted: 04/05/2013 09:39

Sample wt/vol: 1010(mL) | Date Analyzed: 04/10/2013 17:24

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81316 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	49		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	60		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	60		21-110
4165-62-2	Phenol-d5 (Surr)	51		21-110
1718-51-0	Terphenyl-d14 (Surr)	70		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14B-040113 | Lab Sample ID: 240-22680-2

Matrix: Water | Lab File ID: 30415032.D

Analysis Method: 8270D | Date Collected: 04/01/2013 10:55

Extract. Method: 3520C | Date Extracted: 04/05/2013 09:39

Sample wt/vol: 1020(mL) | Date Analyzed: 04/15/2013 10:48

Con. Extract Vol.: 2(mL) | Dilution Factor: 10

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81924 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	270		9.8	4.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	70		20-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	64		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	73		21-110
1718-51-0	Terphenyl-dl4 (Surr)	59		24-110

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Matrix: Water Lab File ID: Z0040318.D

Analysis Method: RSK-175 Date Collected: 04/01/2013 10:55

Sample wt/vol: 17(mL) Date Analyzed: 04/03/2013 15:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80376 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	35	B	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	96		40-122

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-109B-040113 Lab Sample ID: 240-22680-6

Matrix: Water Lab File ID: 05APR13-perc-024.d

Analysis Method: 6850 Date Collected: 04/01/2013 11:05

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/06/2013 01:02

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.33	J	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69A-040113 Lab Sample ID: 240-22680-7

Matrix: Water Lab File ID: 05APR13-perc-025.d

Analysis Method: 6850 Date Collected: 04/01/2013 13:17

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/06/2013 01:18

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-69B-040113 Lab Sample ID: 240-22680-8

Matrix: Water Lab File ID: 05APR13-perc-026.d

Analysis Method: 6850 Date Collected: 04/01/2013 14:34

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/06/2013 01:35

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U I	0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-109B-040113 Lab Sample ID: 240-22680-6

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 11:05

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.96	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.9	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.48	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	190	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	6.4	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	280	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.22	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	180	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	1000	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	0.81	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-109B-040113 Lab Sample ID: 240-22680-6

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 11:05

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-69A-040113 Lab Sample ID: 240-22680-7

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 13:17

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.80	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.73	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.2	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	300	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.5	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	2.3	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	350	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	5.0	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	220	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	670	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	1.9	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-69A-040113 Lab Sample ID: 240-22680-7

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 13:17

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW107B/C-040113 Lab Sample ID: 240-22680-5

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 14:30

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	0.11	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	62	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	32	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	21	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.24	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	8.7	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	2500	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW107B/C-040113 Lab Sample ID: 240-22680-5

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 14:30

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW14A-040113 Lab Sample ID: 240-22680-3

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 12:35

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.38	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	0.10	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	55	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.1	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	19	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.26	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	4.3	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	17	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.24	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	17	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	0.23	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW14A-040113 Lab Sample ID: 240-22680-3

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 12:35

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 10:55

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	4.0	4.0	0.60	ug/L	U		2	6020
7440-38-2	Arsenic	10	10	1.8	ug/L	U		2	6020
7440-41-7	Beryllium	0.40	2.0	0.20	ug/L	J		2	6020
7440-43-9	Cadmium	2.0	2.0	0.20	ug/L	U		2	6020
7440-39-3	Barium	130	10	0.60	ug/L			2	6020
7440-47-3	Chromium	4.0	4.0	1.8	ug/L	U		2	6020
7440-50-8	Copper	3.5	4.0	1.0	ug/L	J		2	6020
7440-02-0	Nickel	130	4.0	1.0	ug/L			2	6020
7439-92-1	Lead	2.0	2.0	0.40	ug/L			2	6020
7782-49-2	Selenium	10	10	1.0	ug/L	U		2	6020
7440-48-4	Cobalt	77	2.0	0.20	ug/L			2	6020
7440-22-4	Silver	0.58	2.0	0.20	ug/L	J		2	6020
7440-28-0	Thallium	4.0	4.0	0.40	ug/L	U		2	6020
7440-66-6	Zinc	180	40	8.0	ug/L			2	6020
7439-98-7	Molybdenum	0.79	20	0.40	ug/L	J		2	6020
7440-62-2	Vanadium	3.9	40	1.6	ug/L	J		2	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 10:55

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	19000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	37000	200	81	ug/L			1	6010C
7440-09-7	Potassium	3800	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	8100	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	2100	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	43000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	21000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 10:55

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 10:55

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	16	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	330	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	120	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U	^ *	1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U	H	1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	74	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.32	0.20	0.035	mg/L			1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW14B-040113 Lab Sample ID: 240-22680-2

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG ID.:

Matrix: Water Date Sampled: 04/01/2013 10:55

Reporting Basis: WET Date Received: 04/02/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	2.1	1.0	0.24	mg/L			1	9060

Appendix C

Support Documentation

HOLDTIME

SDG 240-22680-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW107B/C-040113	240-22680-5	NM	4/1/2013	4/15/2013	4/15/2013	14	0	14
HG	UG/L	MRC-MW-109B-040113	240-22680-6	NM	4/1/2013	4/15/2013	4/15/2013	14	0	14
HG	UG/L	MRC-MW14A-040113	240-22680-3	NM	4/1/2013	4/15/2013	4/15/2013	14	0	14
HG	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/9/2013	4/9/2013	8	0	8
HG	UG/L	MRC-MW-69A-040113	240-22680-7	NM	4/1/2013	4/15/2013	4/15/2013	14	0	14
M	UG/L	MRC-MW107B/C-040113	240-22680-5	NM	4/1/2013	4/16/2013	4/17/2013	15	1	16
M	UG/L	MRC-MW-69A-040113	240-22680-7	NM	4/1/2013	4/16/2013	4/16/2013	15	0	15
M	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/16/2013	4/17/2013	15	1	16
M	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/16/2013	4/16/2013	15	0	15
M	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/9/2013	4/11/2013	8	2	10
M	UG/L	MRC-MW14A-040113	240-22680-3	NM	4/1/2013	4/16/2013	4/17/2013	15	1	16
M	UG/L	MRC-MW14A-040113	240-22680-3	NM	4/1/2013	4/16/2013	4/16/2013	15	0	15
M	UG/L	MRC-MW-109B-040113	240-22680-6	NM	4/1/2013	4/16/2013	4/16/2013	15	0	15
M	UG/L	MRC-MW-69A-040113	240-22680-7	NM	4/1/2013	4/16/2013	4/17/2013	15	1	16
M	UG/L	MRC-MW107B/C-040113	240-22680-5	NM	4/1/2013	4/16/2013	4/16/2013	15	0	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-109B-040113	240-22680-6	NM	4/1/2013	4/16/2013	4/17/2013	15	1	16
ALK	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/5/2013	4/5/2013	4	0	4
CL	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
DOC	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/12/2013	4/12/2013	11	0	11
NH3	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/5/2013	4/5/2013	4	0	4
NTA	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
NTI	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
OPO4	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
PCL	UG/L	MRC-MW-69B-040113	240-22680-8	NM	4/1/2013	4/5/2013	4/6/2013	4	1	5
PCL	UG/L	MRC-MW-69A-040113	240-22680-7	NM	4/1/2013	4/5/2013	4/6/2013	4	1	5
PCL	UG/L	MRC-MW-109B-040113	240-22680-6	NM	4/1/2013	4/5/2013	4/6/2013	4	1	5
PCS	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
SO4	MG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
OS	UG/L	MRC-MW14A-040113	240-22680-3	NM	4/1/2013	4/5/2013	4/10/2013	4	5	9
OS	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/5/2013	4/15/2013	4	10	14
OS	UG/L	MRC-MW-69A-040113	240-22680-7	NM	4/1/2013	4/5/2013	4/12/2013	4	7	11
OS	UG/L	MRC-MW-69B-040113	240-22680-8	NM	4/1/2013	4/5/2013	4/10/2013	4	5	9
OV	UG/L	MRC-MW14A-040113	240-22680-3	NM	4/1/2013	4/8/2013	4/8/2013	7	0	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	TB-040113	240-22680-1	NM	4/1/2013	4/8/2013	4/8/2013	7	0	7
OV	UG/L	MRC-MW-69B-040113	240-22680-8	NM	4/1/2013	4/9/2013	4/9/2013	8	0	8
OV	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/8/2013	4/8/2013	7	0	7
OV	UG/L	MRC-MW-109B-040113	240-22680-6	NM	4/1/2013	4/8/2013	4/8/2013	7	0	7
OV	UG/L	MRC-MW107B/C-040113	240-22680-5	NM	4/1/2013	4/8/2013	4/8/2013	7	0	7
OV	UG/L	MRC-MW106B/C-040113	240-22680-4	NM	4/1/2013	4/8/2013	4/8/2013	7	0	7
OV	UG/L	MRC-MW-69A-040113	240-22680-7	NM	4/1/2013	4/9/2013	4/9/2013	8	0	8
ETHA	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
ETHE	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
METH	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2
OVG	UG/L	MRC-MW14B-040113	240-22680-2	NM	4/1/2013	4/3/2013	4/3/2013	2	0	2

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-22680-1

Job Description: MRC GW Sampling MD

For:
Tetra Tech, Inc
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Tony Apanavage

Approved for release.
John McFadden
Project Manager I
4/22/2013 5:44 PM

John McFadden
Project Manager I
john.mcfadden@testamericainc.com
04/22/2013

cc: Samantha Brenner
Vanessa Good
Mike Martin
Dev Murali
Tobrena Sedlmyer
Final Data Tracking

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Laboratories, Inc.
TestAmerica Canton 4101 Shuffel Street NW, North Canton, OH 44720
Tel (330) 497-9396 Fax (330) 497-0772 www.testamericainc.com

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling MD

Report Number: 240-22680-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals, the 7470A Mercury analyses were performed at the TestAmerica Irvine laboratory. The 6850 Perchlorate analysis was performed at the Test America Sacramento laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/02/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt were 1.9 and 2.4C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-040113 (240-22680-1), MRC-MW14B-040113 (240-22680-2), MRC-MW14A-040113 (240-22680-3), MRC-MW106B/C-040113 (240-22680-4), MRC-MW107B/C-040113 (240-22680-5), MRC-MW-109B-040113 (240-22680-6), MRC-MW-69A-040113 (240-22680-7) and MRC-MW-69B-040113 (240-22680-8) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/08/2013 and 04/09/2013.

Samples MRC-MW14B-040113 (240-22680-2)[100X] and MRC-MW-109B-040113 (240-22680-6)[3.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No MS/MSD for batch 80957 due to instrument fault.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW14B-040113 (240-22680-2), MRC-MW14A-040113 (240-22680-3), MRC-MW-69A-040113 (240-22680-7) and MRC-MW-69B-040113 (240-22680-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/05/2013 and analyzed on 04/10/2013, 04/12/2013 and 04/15/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Sample MRC-MW14B-040113 (240-22680-2)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 80724.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED GASES
Sample MRC-MW14B-040113 (240-22680-2) was analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/03/2013.

Methane was detected in method blank MB 240-80376/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 240-80376.

No other difficulties were encountered during the dissolved gases analysis. All other quality control parameters were within the acceptance limits.

PERCHLORATE
Samples MRC-MW-109B-040113 (240-22680-6), MRC-MW-69A-040113 (240-22680-7) and MRC-MW-69B-040113 (240-22680-8) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/05/2013 and analyzed on 04/06/2013.

No other difficulties were encountered during the perchlorate analyses. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Sample MRC-MW14B-040113 (240-22680-2) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/09/2013 and analyzed on 04/11/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-81088/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW14B-040113 (240-22680-2), MRC-MW14A-040113 (240-22680-3), MRC-MW107B/C-040113 (240-22680-5), MRC-MW-109B-040113 (240-22680-6) and MRC-MW-69A-040113 (240-22680-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/16/2013 and analyzed on 04/16/2013 and 04/17/2013.

Sample MRC-MW14B-040113 (240-22680-2)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The matrix spike duplicate (MSD) percent recoveriesfor batch 98511 were outside control limits for Ba, Ni, Zn. This is attributed matrix interferences.

The matrix spike duplicate (MMSD) percent recoveries for batch 98511 were outside control limits. This is attributed to matrix interferences.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW14B-040113 (240-22680-2), MRC-MW14A-040113 (240-22680-3), MRC-MW107B/C-040113 (240-22680-5), MRC-MW-109B-040113 (240-22680-6) and MRC-MW-69A-040113 (240-22680-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/09/2013 and 04/15/2013.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Sample MRC-MW14B-040113 (240-22680-2) was analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 04/03/2013.

No other difficulties were encountered during the TDS analysis. All other quality control parameters were within the acceptance limits.

ANIONS
Sample MRC-MW14B-040113 (240-22680-2) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/03/2013.

Due to failing QC reanalysis of the following sample Nitrite was performed outside of the analytical holding time: MRC-MW14B-040113 (240-22680-2). Both results are reported.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ALKALINITY

Sample MRC-MW14B-040113 (240-22680-2) was analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/05/2013.

No other difficulties were encountered during the alkalinity analysis. All other quality control parameters were within the acceptance limits.

AMMONIA

Sample MRC-MW14B-040113 (240-22680-2) was analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/05/2013.

No other difficulties were encountered during the ammonia analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Sample MRC-MW14B-040113 (240-22680-2) was analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/12/2013.

No other difficulties were encountered during the TOC analysis. All other quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW Sampling MD

TestAmerica Job ID: 240-22680-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
RSK-175	Dissolved Gases (GC)	RSK	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6010C	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL IRV
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9060	Organic Carbon, Dissolved (DOC)	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes', EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW Sampling MD

TestAmerica Job ID: 240-22680-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22680-1	TB-040113	Water	04/01/13 00:00	04/02/13 09:15
240-22680-2	MRC-MW14B-040113	Water	04/01/13 10:55	04/02/13 09:15
240-22680-3	MRC-MW14A-040113	Water	04/01/13 12:35	04/02/13 09:15
240-22680-4	MRC-MW106B/C-040113	Water	04/01/13 13:35	04/02/13 09:15
240-22680-5	MRC-MW107B/C-040113	Water	04/01/13 14:30	04/02/13 09:15
240-22680-6	MRC-MW-109B-040113	Water	04/01/13 11:05	04/02/13 09:15
240-22680-7	MRC-MW-69A-040113	Water	04/01/13 13:17	04/02/13 09:15
240-22680-8	MRC-MW-69B-040113	Water	04/01/13 14:34	04/02/13 09:15

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Tony Apanavage	4/1/13	114475
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
10251 Century Blvd Ste 200	(301) 528-5552		
City Germantown / **State** MD / **Zip Code** 20874	**Site Contact** Stu Cameron	**Lab Contact**	
Project Name and Location (State) MRC GW Sampling MD	**Carrier/Waybill Number**		
Contract/Purchase Order/Quote No. 112IC04795-02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	Total Metals	1,4-Dioxane	Perchlorate	Dissolved Gases	Ammonia	Alkalinity, TDS, Anions	Ca, Mn, Mg, Na, SO4	DOC	Special Instructions/ Conditions of Receipt
TB-040113	—	—		X						2			X									
MRC-MW14B-040113	4/1/13	1055		X			3	3	2	5			X	X	X		X	X	X	X	X	
MRC-MW14A-040113		1235		X			2		1	3			X	X	X							
MRC-MW106B/C-040113		1335		X						3			X									
MRC-MW107B/C-040113		1430		X					1	3			X	X								
MRC-MW-109B-040113		1105		X			1		1	3			X	X		X						
MRC-MW-69A-040113		1317		X			3		1	3			X	X	X	X						
MRC-MW-69B-040113		1434		X			3			3			X		X	X						

240-22680 Chain of Custody

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Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4-1-13	1600	1. Received By	4/1/13	1600
2. Relinquished By	4/1/13	1630	2. Received By	4-2-13	915
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22680

Client Tetra Tech Site Name _____ By: _____

Cooler Received on 4-2-13 Opened on 4-2-13 (Signature)

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF 0°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 4G	(CF +1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 5G	(CF +1 °C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 8	(CF +1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C

☐ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Ea	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) MRC-MW-14A-040613 1X500mL were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? 1135

Client ID	pH pH Strip Lot# HC256691	Date	Initials
1055	<2 <2 <2	4-2-13	TLS
1235	<2	"	"
1430	<2	"	"
1605	<2	"	"
1317	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client cooler	2.4	2.4	1	ICE
Client cooler	1.9	1.9	1	ICE

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22680-1

Login Number: 22680
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/03/13 12:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22680-1

Login Number: 22680
List Number: 1
Creator: Peterson, Erik

List Source: TestAmerica Sacramento
List Creation: 04/03/13 02:47 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-040113	240-22680-1	90	103	91	81
MRC-MW14B-040113	240-22680-2	95	107	88	87
MRC-MW14A-040113	240-22680-3	89	103	87	83
MRC-MW106B/C-040113	240-22680-4	90	109	86	88
MRC-MW107B/C-040113	240-22680-5	97	108	85	87
MRC-MW-109B-040113	240-22680-6	89	102	91	87
MRC-MW-69A-040113	240-22680-7	86	100	88	86
MRC-MW-69B-040113	240-22680-8	91	105	89	87
	MB 240-80957/6	92	106	88	87
	MB 240-81120/5	88	98	86	82
	LCS 240-80957/5	94	95	94	103
	LCS 240-81120/4	94	97	96	104
	MRL 240-80957/8	93	103	93	95
	240-22783-B-2 MS	90	95	98	107
	240-22783-B-2 MSD	96	97	94	104

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/04/2013 11:03

Analysis Batch Number: 80603 End Date: 04/04/2013 22:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-80603/1		04/04/2013 11:03	1	BFB102C.D	DB-624 0.18(mm)
STD8260 240-80603/2 IC		04/04/2013 12:03	1	UXC0373A.D	DB-624 0.18(mm)
STD8260 240-80603/3 IC		04/04/2013 12:26	1	UXC0374.D	DB-624 0.18(mm)
STD8260 240-80603/4 ICIS		04/04/2013 12:49	1	UXC0375.D	DB-624 0.18(mm)
STD8260 240-80603/5 IC		04/04/2013 13:11	1	UXC0376.D	DB-624 0.18(mm)
STD8260 240-80603/6 IC		04/04/2013 13:33	1	UXC0377.D	DB-624 0.18(mm)
STD8260 240-80603/7 IC		04/04/2013 13:56	1	UXC0378.D	DB-624 0.18(mm)
STD 240-80603/8 IC		04/04/2013 14:18	1	UXC0379.D	DB-624 0.18(mm)
STD 240-80603/9 IC		04/04/2013 14:41	1	UXC0380.D	DB-624 0.18(mm)
STD 240-80603/10 IC		04/04/2013 15:03	1	UXC0381.D	DB-624 0.18(mm)
STD 240-80603/11 IC		04/04/2013 15:25	1	UXC0382.D	DB-624 0.18(mm)
STD 240-80603/12 IC		04/04/2013 15:47	1	UXC0383.D	DB-624 0.18(mm)
STD 240-80603/13 IC		04/04/2013 16:10	1	UXC0384.D	DB-624 0.18(mm)
ICV 240-80603/14		04/04/2013 16:32	1	UXC0385.D	DB-624 0.18(mm)
ZZZZZ		04/04/2013 16:54	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 17:16	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:01	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:23	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:45	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:08	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:30	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:52	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:15	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:37	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:59	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:21	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:44	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:06	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:28	1		DB-624 0.18(mm)
LODV 240-80603/31		04/04/2013 22:51	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
Acrolein	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	0.0383	0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
Acetonitrile	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		0.0282				12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Linl	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
Tetrahydrofuran	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	0.0478							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
1,4-Dioxane	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	0.0028							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Lin1	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Lin1	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	54281 2671351	111647	315472	612270	1320135	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	87221 2932821	171156	410136	755402	1490257	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	90084 3646043	174429	448535	910427	1815619	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	60792	123523	309237	536745	1288825	1.00	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	57222 1939853	108559	259106	503212	1172903	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	85003 4007156	163491	436047	852366	1900520	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Qua	60508 2188395	142315	363468	562867	1175631	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	50825 2444441	103328	272671	516040	1068324	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	36448 1965522	70005	209727	411728	882332	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Qua	41437 707021	54698	130552	219202	443563	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	71808 3589348	144182	380440	762887	1596939	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	107608 5647776	193818	557304	1163932	2592649	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	44235	90109	214088	397796	877589	10.0	20.0	50.0	100	200
Methyl acetate	FB	Ave	52519 1976826	87258	254849	511378	993247	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	103727 2411358	139915	331483	632624	1217366	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	27571	58766	150997	304259	621537	20.0	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	26338 1008263	53653	138026	289578	566046	2.00 80.0	4.00	10.0	20.0	40.0
trans-1,2-Dichloroethene	FB	Ave	54053 2492750	94410	275110	588790	1164317	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	92573 4302100	174821	496470	1010488	2110142	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10883 485484	16430	48173	112324	216056	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	87778 3973500	158005	441003	945915	1830936	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	5416 303463	9742	29528	62456	121528	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	40729 2026035	70603	211764	439337	958452	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	54689 2595845	103777	294324	624550	1235730	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	30308 1104785	51621	152213	279716	563899	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	24281 1106320	48133	127148	278570	538571	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Lin1	10888 319926	15290	39623	86873	163343	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	80202 3998867	157292	441301	941809	1851795	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	56213 3044165	104528	314700	681095	1462118	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	78582 3822610	139736	420731	898434	1856621	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	61215 3214457	115424	334111	744542	1451922	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	41142 2561023	77991	242269	544212	1198439	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	210583 9670976	383345	1067319	2273858	4388571	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	66913 2673503	108050	308705	671722	1252574	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	50741 2415156	88207	262506	574270	1096701	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	74811 3648018	121816	371567	833848	1749289	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43481 2147458	82744	233906	492649	972957	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	23148 1101620	41437	133579	275319	534465	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	14368	28653	97278	207802	456726	50.0	100	250	500	1000
Bromodichloromethane	FB	Ave	38268 2483374	70762	215959	529245	1075797	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	31897 1878072	61728	169791	409951	819145	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Lin1	37843 2705668	68349	228889	562927	1150799	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	44600 2223643	80981	221149	512791	1050664	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	192498 10374585	335635	999248	2282849	4486991	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Lin1	25269 2080220	51284	172879	407902	869904	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Lin1	25909 1851096	48026	164320	401441	798354	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	31689 1487736	54791	172079	370752	691165	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	38043 1831312	71087	194819	431900	856200	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	59219 2704806	105584	300304	676120	1234250	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	23039 1416027	57319	144925	312066	653134	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Lin1	20266 1548407	42630	128097	301937	664794	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	27236 1456100	53404	152421	361744	684048	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	128109 5933185	224744	643524	1426894	2761984	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	29934 1818217	57601	166423	410673	872956	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	60118 3286200	114605	331842	783064	1523252	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	284699 14564382	549834	1660008	3926757	7840413	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	67420 3937106	142693	412176	946532	1975850	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Lin1	101493 6778584	210975	658962	1548148	3197923	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Lin1	10452 767541	21784	62233	147934	347777	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	155504 9591628	340910	1000915	2337960	4939757	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	50441 2309180	95029	261383	617538	1223028	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	39047 1592000	73074	205973	445045	906648	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	13620 504429	23883	63279	138117	272793	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Qua	2707 329232	5468	21841	51724	129761	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	45505 2418232	90052	270063	624441	1287610	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	45554 2145247	87171	274367	597254	1192754	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	120337 6969911	247280	841365	1967217	4057094	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	146149 7528191	286215	866599	1963537	3979571	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	103890 5808396	212316	670083	1602636	3366304	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	137002 6876405	281254	863051	1948323	4185655	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	153633 7845243	321691	997810	2334194	4909841	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	89119 4102465	180680	535145	1149747	2387647	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	139202 6513520	270484	848693	1973526	4232714	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	106686 4402295	198448	567289	1183375	2557289	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	89974 3596503	177459	512209	1107802	2355646	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	120138 5604065	239383	755792	1739079	3855247	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	3345 142316	8314	17478	46449	108470	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	58960 1681448	122026	348074	738521	1576326	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	34405	77932	237398	506103	1149600	1.00	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	32254	64187	168517	342493	703195	1.00	2.00	5.00	10.0	20.0
Naphthalene	DCB	Linl	52421	123293	423179	987933	2251541	1.00	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	30231	73879	209875	444919	891163	1.00	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	46392 2012983	80652	215581	469566	930548	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	48086 2122132	87655	245590	504909	983002	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	161255 8213858	289151	813532	1855747	3699236	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	49303 2321526	96796	263742	561374	1193146	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Linl = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.9601 0.7242	0.9050	0.8719	0.8759	0.8132	Ave		0.8584				9.5		15.0			
Ethyl ether	0.3412 0.2934	0.3226	0.3378	0.3107	0.3010	Ave		0.3178				6.1		15.0			
3-Chloro-1-propene	0.1577 0.1521	0.1355	0.1441	0.1436	0.1526	Ave		0.1476				5.4		15.0			
Diisopropyl ether	0.2710 0.3092	0.2719	0.2883	0.2894	0.3057	Ave		0.2893				5.6		15.0			
2-Chloro-1,3-butadiene	0.5134 0.5286	0.4490	0.5190	0.5156	0.5192	Ave		0.5075				5.7		15.0			
Ethyl-t-butyl ether (ETBE)	0.5996 0.6507	0.6278	0.6422	0.6520	0.6730	Ave		0.6409				3.9		15.0			
Ethyl acetate	0.1671 0.1520	0.1351	0.1372	0.1445	0.1460	Ave		0.1470				7.9		15.0			
Propionitrile	0.0279 0.0276	0.0303	0.0278	0.0267	0.0286	Ave		0.0282				4.4		15.0			
Methacrylonitrile	0.1142 0.1154	0.1292	0.1216	0.1061	0.1151	Ave		0.1169				6.7		15.0			
Isobutyl alcohol	0.0041 0.0040	0.0039	0.0038	0.0045	0.0043	Ave		0.0041				6.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4454 0.5069	0.4734	0.4860	0.4960	0.5048	Ave		0.4854				4.8		15.0			
n-Heptane	0.0775 0.0685	0.0576	0.0627	0.0688	0.0669	Ave		0.0670				10.0		15.0			
n-Butanol	0.0026 0.0025	0.0026	0.0028	0.0029	0.0027	Ave		0.0027				5.4		15.0			
Methyl methacrylate	0.1572 0.1432	0.1218	0.1256	0.1264	0.1350	Ave		0.1349				9.9		15.0			
2-Nitropropane	0.0187 0.0239	0.0191	0.0171	0.0186	0.0192	Ave		0.0194				12.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0812 0.0946	0.0685	0.0862	0.0895	0.0990	Ave		0.0865				12.0		15.0			
1,2,3-Trimethylbenzene	2.5686 3.4874	2.5916	3.0529	3.0965	3.4820	Ave		3.0465				13.0		15.0			
2-Methylnaphthalene	0.2129 0.6051	0.2387	0.2880	0.4178	0.5799	Qua	-1.627	0.5468	0.0010						0.9970		0.9900
n-Butyl acetate	0.1485 0.2372	0.1744	0.1786	0.2091	0.2206	Linl	-0.239	0.2320							0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	128219 4759915	238116	610234	1264054	2494089	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	45562 1928356	84876	236417	448404	923122	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	21063 999436	35650	100832	207287	467983	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	180962 10162124	357680	1008699	2088661	4688601	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	68560 3474271	118133	363216	744180	1592517	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	80083 4276942	165169	449491	940958	2064046	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	44621 1997979	71082	192095	417144	895470	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	7461 362543	15955	38878	77078	175368	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	15246 758391	34000	85112	153143	352988	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	11078 528247	20382	53350	128473	262747	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	59486 3331366	124564	340138	715830	1548164	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	10356 449987	15157	43911	99327	205046	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	6884 326800	13603	38627	83049	168061	20.0 800	40.0	100	200	400
Methyl methacrylate	FB	Ave	20992 941114	32055	87919	182417	414030	1.00 40.0	2.00	5.00	10.0	20.0
2-Nitropropane	FB	Ave	5003 313582	10051	23899	53814	117630	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Ave	34436 2080247	59435	195715	457197	1003722	10.0 400	20.0	50.0	100	200

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCB	Ave	108979 7668023	224868	693285	1581338	3531405	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCB	Qua	18063 2660872	41419	130820	426780	1176215	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Lin1	39654 3118307	91759	249952	603511	1353022	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3734		1.00	0.0100	-4.4	50.0
Chloromethane	Ave	0.5133	0.5639	0.1000	1.00	0.0100	9.9	50.0
Vinyl chloride	Ave	0.5765	0.6098		1.00	0.0100	5.8	20.0
Bromomethane	Ave	0.3951	0.3863		1.00	0.0100	-2.2	50.0
Chloroethane	Ave	0.3438	0.3863		1.00	0.0100	12.4	50.0
Trichlorofluoromethane	Ave	0.5693	0.6223		1.00	0.0100	9.3	50.0
Acrolein	Qua		0.0606		20.0	0.0300	48.3	50.0
1,1-Dichloroethene	Ave	0.3445	0.4197		1.00	0.0100	21.8*	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3676		1.00	0.0100	39.7	50.0
Acetone	Qua		0.0747		10.0	0.0200	-0.2	50.0
Iodomethane	Ave	0.4958	0.6219		1.00	0.0100	25.4	50.0
Carbon disulfide	Ave	0.7463	1.004		1.00	0.0100	34.5	50.0
Acetonitrile	Ave	0.0282	0.0333		20.0	0.0300	18.3	50.0
Methyl acetate	Ave	0.1586	0.1827		10.0	0.0100	15.2	50.0
Methylene Chloride	Lin1		0.4258		1.00	0.0100	11.5	50.0
tert-Butyl alcohol	Ave	0.0097	0.0098		50.0	0.200	1.3	50.0
Acrylonitrile	Ave	0.0871	0.0938		20.0	0.0300	7.6	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3791		1.00	0.0100	6.2	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6624		1.00	0.0100	4.9	50.0
Hexane	Ave	0.0668	0.0850		1.00	0.0100	27.3*	20.0
1,1-Dichloroethane	Ave	0.5749	0.6173	0.1000	1.00	0.0100	7.4	50.0
Vinyl acetate	Ave	0.0383	0.0347		2.00	0.0100	-9.4	50.0
2,2-Dichloropropane	Ave	0.2770	0.2681		1.00	0.0100	-3.2	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4011		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0883		10.0	0.0200	-3.0	50.0
Bromochloromethane	Ave	0.1662	0.1613		1.00	0.0100	-3.0	50.0
Tetrahydrofuran	Lin1		0.0486		5.00	0.0100	-3.0	50.0
Chloroform	Ave	0.5671	0.6009		1.00	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4343		1.00	0.0100	5.4	50.0
Cyclohexane	Ave	0.5423	0.6246		1.00	0.0100	15.2	50.0
1,1-Dichloropropene	Ave	0.4381	0.4705		1.00	0.0100	7.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3480		1.00	0.0100	7.3	50.0
Benzene	Ave	1.387	1.441		1.00	0.0100	3.9	50.0
1,2-Dichloroethane	Ave	0.4040	0.4058		1.00	0.0100	0.4	50.0
Trichloroethene	Ave	0.3397	0.3347		1.00	0.0100	-1.5	50.0
Methylcyclohexane	Ave	0.5006	0.5473		1.00	0.0100	9.3	50.0
1,2-Dichloropropane	Ave	0.3010	0.2966		1.00	0.0100	-1.5	20.0
Dibromomethane	Ave	0.1618	0.1715		1.00	0.0100	6.0	50.0
Bromodichloromethane	Ave	0.3013	0.3059		1.00	0.0100	1.5	50.0
2-Chloroethyl vinyl ether	Ave	0.1193	0.1081		10.0	0.0100	-9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.2826		1.00	0.0100	-20.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1608		10.0	0.0200	5.0	50.0
Toluene	Ave	2.028	2.055		1.00	0.0100	1.3	20.0
trans-1,3-Dichloropropene	Lin1		0.3234		1.00	0.0100	-20.9	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3026		1.00	0.0100	-6.4	50.0
Tetrachloroethene	Ave	0.3905	0.3729		1.00	0.0100	-4.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5712		1.00	0.0100	-3.2	50.0
2-Hexanone	Ave	0.1436	0.1562		10.0	0.0200	8.8	50.0
Dibromochloromethane	Lin1		0.2410		1.00	0.0100	-21.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.3045		1.00	0.0100	-0.1	50.0
Chlorobenzene	Ave	1.276	1.287	0.3000	1.00	0.0100	0.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3671		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.7059		1.00	0.0100	5.4	20.0
m-Xylene & p-Xylene	Ave	1.626	1.762		2.00	0.0200	8.3	50.0
o-Xylene	Ave	0.8173	0.9066		1.00	0.0100	10.9	50.0
Styrene	Lin1		1.454		1.00	0.0100	-0.1	50.0
Bromoform	Lin1		0.1234	0.1000	1.00	0.0100	-20.3	50.0
Isopropylbenzene	Ave	1.984	2.244		1.00	0.0100	13.1	50.0
Bromobenzene	Ave	0.9263	0.8726		1.00	0.0100	-5.8	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6194	0.3000	1.00	0.0100	-10.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1915		1.00	0.0100	-13.2	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0862		1.00	0.0200	-7.6	50.0
n-Propylbenzene	Ave	0.9249	0.9564		1.00	0.0100	3.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8704		1.00	0.0100	-1.6	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.869		1.00	0.0100	5.1	50.0
4-Chlorotoluene	Ave	2.918	2.862		1.00	0.0100	-1.9	50.0
tert-Butylbenzene	Ave	2.268	2.336		1.00	0.0100	3.0	50.0
1,2,4-Trimethylbenzene	Ave	2.853	3.027		1.00	0.0100	6.1	50.0
sec-Butylbenzene	Ave	3.298	3.499		1.00	0.0100	6.1	50.0
1,3-Dichlorobenzene	Ave	1.741	1.755		1.00	0.0100	0.8	50.0
p-Isopropyltoluene	Ave	2.821	3.116		1.00	0.0100	10.5	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.709		1.00	0.0100	2.1	50.0
n-Butylbenzene	Ave	2.489	2.779		1.00	0.0100	11.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0607		2.00	0.0100	-11.4	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7228		1.00	0.0100	-4.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4851		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.287		1.00	0.0100	-16.2	50.0
1,2,3-Trichlorobenzene	Ave	0.6565	0.6321		1.00	0.0100	-3.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.3017		0.00858	0.00890	-3.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.667	1.608		0.00858	0.00890	-3.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5350		0.00918	0.00890	3.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3178	0.3272		2.00	0.0100	3.0	50.0
Diisopropyl ether	Ave	0.2893	0.2870		10.0	0.0100	-0.8	50.0
Isobutyl alcohol	Ave	0.0041	0.0047		50.0	0.500	14.7	50.0
Cyclohexanone	Ave	0.0865	0.0130		20.0	0.200	-85.0*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.219		0.0106	0.0100	5.7	50.0

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/08/2013 10:17

Analysis Batch Number: 80957 End Date: 04/08/2013 20:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-80957/1		04/08/2013 10:17	1	BFB105.D	DB-624 0.18(mm)
CCVIS 240-80957/2		04/08/2013 10:48	1	UXC0498.D	DB-624 0.18(mm)
CCV 240-80957/3		04/08/2013 11:11	1	UXC0499.D	DB-624 0.18(mm)
ZZZZZ		04/08/2013 11:34	1		DB-624 0.18(mm)
LCS 240-80957/5		04/08/2013 11:57	1	UXC0501.D	DB-624 0.18(mm)
MB 240-80957/6		04/08/2013 12:42	1	UXC0503.D	DB-624 0.18(mm)
ZZZZZ		04/08/2013 13:53	5		DB-624 0.18(mm)
MRL 240-80957/8		04/08/2013 14:16	1	UXC0505B.D	DB-624 0.18(mm)
ZZZZZ		04/08/2013 15:24	500000		DB-624 0.18(mm)
ZZZZZ		04/08/2013 15:46	1		DB-624 0.18(mm)
ZZZZZ		04/08/2013 16:09	1		DB-624 0.18(mm)
ZZZZZ		04/08/2013 16:31	1		DB-624 0.18(mm)
ZZZZZ		04/08/2013 16:53	1		DB-624 0.18(mm)
ZZZZZ		04/08/2013 17:15	1		DB-624 0.18(mm)
ZZZZZ		04/08/2013 18:13	1		DB-624 0.18(mm)
240-22680-1	TB-040113	04/08/2013 18:36	1	UXC0515.D	DB-624 0.18(mm)
240-22680-2	MRC-MW14B-040113	04/08/2013 18:58	100	UXC0516.D	DB-624 0.18(mm)
240-22680-3	MRC-MW14A-040113	04/08/2013 19:20	1	UXC0517.D	DB-624 0.18(mm)
240-22680-4	MRC-MW106B/C-040113	04/08/2013 19:42	1	UXC0518.D	DB-624 0.18(mm)
240-22680-5	MRC-MW107B/C-040113	04/08/2013 20:05	1	UXC0519.D	DB-624 0.18(mm)
240-22680-6	MRC-MW-109B-040113	04/08/2013 20:27	3.33	UXC0520.D	DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: BFB105.D BFB Injection Date: 04/08/2013

Instrument ID: A3UX15 BFB Injection Time: 10:17

Analysis Batch No.: 80957

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.2	
75	30.0 - 60.0 % of mass 95	49.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	8.0	
173	Less than 2.0 % of mass 174	0.9	(1.0)1
174	50.0 - 120.00 % of mass 95	91.3	
175	5.0 - 9.0 % of mass 174	6.3	(6.9)1
176	95.0 - 101.0 % of mass 174	89.9	(98.5)1
177	5.0 - 9.0 % of mass 176	6.0	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-80957/2	UXC0498.D	04/08/2013	10:48
	CCV 240-80957/3	UXC0499.D	04/08/2013	11:11
	LCS 240-80957/5	UXC0501.D	04/08/2013	11:57
	MB 240-80957/6	UXC0503.D	04/08/2013	12:42
	MRL 240-80957/8	UXC0505B.D	04/08/2013	14:16
TB-040113	240-22680-1	UXC0515.D	04/08/2013	18:36
MRC-MW14B-040113	240-22680-2	UXC0516.D	04/08/2013	18:58
MRC-MW14A-040113	240-22680-3	UXC0517.D	04/08/2013	19:20
MRC-MW106B/C-040113	240-22680-4	UXC0518.D	04/08/2013	19:42
MRC-MW107B/C-040113	240-22680-5	UXC0519.D	04/08/2013	20:05
MRC-MW-109B-040113	240-22680-6	UXC0520.D	04/08/2013	20:27

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-80957/2 Calibration Date: 04/08/2013 10:48

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0498.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3645		1.00	0.0100	-6.7	50.0
Chloromethane	Ave	0.5133	0.5147	0.1000	1.00	0.0100	0.3	50.0
Vinyl chloride	Ave	0.5765	0.5724		1.00	0.0100	-0.7	20.0
Bromomethane	Ave	0.3951	0.4225		1.00	0.0100	6.9	50.0
Chloroethane	Ave	0.3438	0.3857		1.00	0.0100	12.2	50.0
Trichlorofluoromethane	Ave	0.5693	0.5826		1.00	0.0100	2.3	50.0
Acrolein	Qua		0.0536		20.0	0.100	44.8	50.0
1,1-Dichloroethene	Ave	0.3445	0.3918		1.00	0.0100	13.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3141		1.00	0.0100	19.4	50.0
Acetone	Qua		0.0731		10.0	0.0200	-2.6	50.0
Iodomethane	Ave	0.4958	0.5871		1.00	0.0100	18.4	50.0
Carbon disulfide	Ave	0.7463	0.9727		1.00	0.0100	30.3	50.0
Acetonitrile	Ave	0.0282	0.0308		20.0	0.100	9.4	50.0
Methyl acetate	Ave	0.1586	0.1455		10.0	0.0200	-8.3	50.0
Methylene Chloride	Lin1		0.4167		1.00	0.0100	8.9	50.0
tert-Butyl alcohol	Ave	0.0097	0.0093		50.0	0.200	-3.4	50.0
Acrylonitrile	Ave	0.0871	0.0926		20.0	0.0200	6.3	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3760		1.00	0.0100	5.4	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6411		1.00	0.0100	1.5	50.0
Hexane	Ave	0.0668	0.0734		1.00	0.0100	9.8	20.0
1,1-Dichloroethane	Ave	0.5749	0.5917	0.1000	1.00	0.0100	2.9	50.0
Vinyl acetate	Ave	0.0383	0.0411		2.00	0.0100	7.3	50.0
2,2-Dichloropropane	Ave	0.2770	0.2825		1.00	0.0100	2.0	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.3957		1.00	0.0100	5.0	50.0
2-Butanone	Ave	0.0910	0.0892		10.0	0.0200	-2.1	50.0
Bromochloromethane	Ave	0.1662	0.1706		1.00	0.0100	2.6	50.0
Tetrahydrofuran	Lin1		0.0418		5.00	0.0100	-17.3	50.0
Chloroform	Ave	0.5671	0.6054		1.00	0.0100	6.8	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4365		1.00	0.0100	5.9	50.0
Cyclohexane	Ave	0.5423	0.5982		1.00	0.0100	10.3	50.0
1,1-Dichloropropene	Ave	0.4381	0.4591		1.00	0.0100	4.8	50.0
Carbon tetrachloride	Ave	0.3243	0.3558		1.00	0.0100	9.7	50.0
Benzene	Ave	1.387	1.444		1.00	0.0100	4.1	50.0
1,2-Dichloroethane	Ave	0.4040	0.3969		1.00	0.0100	-1.8	50.0
Trichloroethene	Ave	0.3397	0.3276		1.00	0.0100	-3.6	50.0
Methylcyclohexane	Ave	0.5006	0.5254		1.00	0.0100	5.0	50.0
1,2-Dichloropropane	Ave	0.3010	0.2954		1.00	0.0100	-1.9	20.0
Dibromomethane	Ave	0.1618	0.1678		1.00	0.0100	3.7	50.0
1,4-Dioxane	Lin1		0.0021		50.0	0.500	-19.7	50.0
Bromodichloromethane	Ave	0.3013	0.3178		1.00	0.0100	5.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-80957/2 Calibration Date: 04/08/2013 10:48

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0498.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1200		10.0	0.0200	0.6	50.0
cis-1,3-Dichloropropene	Lin1		0.3154		1.00	0.0100	-12.4	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1584		10.0	0.0200	3.4	50.0
Toluene	Ave	2.028	2.120		1.00	0.0100	4.5	20.0
trans-1,3-Dichloropropene	Lin1		0.3647		1.00	0.0100	-11.7	50.0
Ethyl methacrylate	Lin1		0.3276		1.00	0.0100	-13.3	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3211		1.00	0.0100	-0.6	50.0
Tetrachloroethene	Ave	0.3905	0.4001		1.00	0.0100	2.4	50.0
1,3-Dichloropropane	Ave	0.5899	0.5990		1.00	0.0100	1.6	50.0
2-Hexanone	Ave	0.1436	0.1423		10.0	0.0200	-0.9	50.0
Dibromochloromethane	Lin1		0.2724		1.00	0.0100	-12.3	50.0
1,2-Dibromoethane	Ave	0.3048	0.3063		1.00	0.0100	0.5	50.0
Chlorobenzene	Ave	1.276	1.321	0.3000	1.00	0.0100	3.5	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3885		1.00	0.0100	9.9	50.0
Ethylbenzene	Ave	0.6700	0.7339		1.00	0.0100	9.5	20.0
m-Xylene & p-Xylene	Ave	1.626	1.826		2.00	0.0200	12.3	50.0
o-Xylene	Ave	0.8173	0.9162		1.00	0.0100	12.1	50.0
Styrene	Lin1		1.441		1.00	0.0100	-1.0	50.0
Bromoform	Lin1		0.1386	0.1000	1.00	0.0100	-11.2	50.0
Isopropylbenzene	Ave	1.984	2.193		1.00	0.0100	10.5	50.0
Bromobenzene	Ave	0.9263	0.8551		1.00	0.0100	-7.7	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6525	0.3000	1.00	0.0100	-5.6	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1845		1.00	0.0100	-16.4	50.0
trans-1,4-Dichloro-2-butene	Qua		0.1124		1.00	0.0100	36.8	50.0
n-Propylbenzene	Ave	0.9249	0.9359		1.00	0.0100	1.2	50.0
2-Chlorotoluene	Ave	0.8847	0.8670		1.00	0.0100	-2.0	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.910		1.00	0.0100	6.6	50.0
4-Chlorotoluene	Ave	2.918	2.893		1.00	0.0100	-0.9	50.0
tert-Butylbenzene	Ave	2.268	2.355		1.00	0.0100	3.8	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.970		1.00	0.0100	4.1	50.0
sec-Butylbenzene	Ave	3.298	3.452		1.00	0.0100	4.7	50.0
1,3-Dichlorobenzene	Ave	1.741	1.726		1.00	0.0100	-0.8	50.0
p-Isopropyltoluene	Ave	2.821	2.960		1.00	0.0100	4.9	50.0
1,4-Dichlorobenzene	Ave	1.894	1.828		1.00	0.0100	-3.5	50.0
1,2-Dichlorobenzene	Ave	1.674	1.686		1.00	0.0100	0.7	50.0
n-Butylbenzene	Ave	2.489	2.638		1.00	0.0100	6.0	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0663		2.00	0.0100	-3.3	50.0
1,3,5-Trichlorobenzene	Ave	1.071	1.073		1.00	0.0100	0.2	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.6980		1.00	0.0100	-7.5	50.0
Hexachlorobutadiene	Ave	0.5612	0.4560		1.00	0.0100	-18.8	50.0
Naphthalene	Lin1		1.218		1.00	0.0100	-20.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-80957/2 Calibration Date: 04/08/2013 10:48

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0498.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.5839		1.00	0.0100	-11.0	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2714		0.00829	0.00890	-6.8	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2901		0.00826	0.00890	-7.2	50.0
Toluene-d8 (Surr)	Ave	1.667	1.643		0.00877	0.00890	-1.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5407		0.00928	0.00890	4.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCV 240-80957/3 Calibration Date: 04/08/2013 11:11

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0499.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.8915		2.00	0.0100	3.9	50.0
Ethyl ether	Ave	0.3178	0.3024		2.00	0.0100	-4.8	50.0
3-Chloro-1-propene	Ave	0.1476	0.1597		2.00	0.0100	8.2	50.0
Diisopropyl ether	Ave	0.2893	0.3028		10.0	0.0500	4.7	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.4897		2.00	0.0100	-3.5	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6703		5.00	0.0100	4.6	50.0
Ethyl acetate	Ave	0.1470	0.1434		4.00	0.0200	-2.4	50.0
Propionitrile	Ave	0.0282	0.0273		4.00	0.0200	-2.9	50.0
Methacrylonitrile	Ave	0.1169	0.1177		2.00	0.0100	0.7	50.0
Isobutyl alcohol	Ave	0.0041	0.0042		50.0	0.200	1.9	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.5078		5.00	0.0100	4.6	50.0
n-Heptane	Ave	0.0670	0.0664		1.00	0.0100	-1.0	50.0
n-Butanol	Ave	0.0027	0.0029		50.0	0.200	7.8	50.0
Methyl methacrylate	Ave	0.1349	0.1305		2.00	0.0100	-3.3	50.0
2-Nitropropane	Ave	0.0194	0.0186		2.00	0.0200	-4.4	50.0
Cyclohexanone	Ave	0.0865	0.0697		20.0	0.100	-19.4	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.238		0.0106	0.0100	6.3	50.0
2-Methylnaphthalene	Qua		0.1955		5.00	0.0200	-50.3*	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: UXC0503.D Lab Sample ID: MB 240-80957/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/08/2013 12:42

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80957/5	UXC0501.D	04/08/2013 11:57
TB-040113	240-22680-1	UXC0515.D	04/08/2013 18:36
MRC-MW14B-040113	240-22680-2	UXC0516.D	04/08/2013 18:58
MRC-MW14A-040113	240-22680-3	UXC0517.D	04/08/2013 19:20
MRC-MW106B/C-040113	240-22680-4	UXC0518.D	04/08/2013 19:42
MRC-MW107B/C-040113	240-22680-5	UXC0519.D	04/08/2013 20:05
MRC-MW-109B-040113	240-22680-6	UXC0520.D	04/08/2013 20:27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80957/6

Matrix: Water Lab File ID: UXC0503.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 12:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80957/6

Matrix: Water | Lab File ID: UXC0503.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/08/2013 12:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80957 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80957/6

Matrix: Water Lab File ID: UXC0503.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 12:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	92		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80957/6

Matrix: Water Lab File ID: UXC0503.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/08/2013 12:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80957 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0501.D

Lab ID: LCS 240-80957/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.0	90	43-136	
Benzene	10.0	10.4	104	83-112	
Bromobenzene	10.0	9.53	95	76-115	
Bromochloromethane	10.0	10.5	105	77-120	
Bromodichloromethane	10.0	10.2	102	72-121	
Bromoform	10.0	8.12	81	40-131	
Bromomethane	10.0	8.73	87	11-185	
2-Butanone	20.0	19.2	96	60-126	
Carbon disulfide	10.0	12.4	124	62-142	
Carbon tetrachloride	10.0	10.7	107	66-128	
Chlorobenzene	10.0	9.82	98	85-110	
Chloroethane	10.0	10.1	101	25-153	
2-Chloroethyl vinyl ether	10.0	8.44 J	84	52-131	
Chloroform	10.0	10.3	103	79-117	
Chloromethane	10.0	9.39	94	44-126	
2-Chlorotoluene	10.0	9.58	96	76-116	
4-Chlorotoluene	10.0	9.66	97	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.16	82	61-115	
Dibromochloromethane	10.0	7.72	77	64-119	
1,2-Dibromo-3-Chloropropane	10.0	9.82	98	42-136	
1,2-Dibromoethane	10.0	9.54	95	79-113	
Dibromomethane	10.0	9.81	98	81-120	
1,2-Dichlorobenzene	10.0	9.84	98	81-110	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,4-Dichlorobenzene	10.0	9.93	99	82-110	
Dichlorodifluoromethane	10.0	7.28	73	19-129	
1,1-Dichloroethane	10.0	11.0	110	82-115	
1,2-Dichloroethane	10.0	9.98	100	71-127	
1,1-Dichloroethene	10.0	10.8	108	78-131	
1,2-Dichloropropane	10.0	10.1	101	81-115	
1,3-Dichloropropane	10.0	9.58	96	79-116	
2,2-Dichloropropane	10.0	10.4	104	50-129	
1,1-Dichloropropene	10.0	10.0	100	83-114	
Diisopropyl ether	10.0	10.1	101	77-118	
Ethylbenzene	10.0	10.5	105	83-112	
Hexachlorobutadiene	10.0	8.23	82	36-134	
2-Hexanone	20.0	20.8	104	55-133	
Isopropylbenzene	10.0	10.6	106	75-114	
Methylene Chloride	10.0	10.7	107	66-131	
4-Methyl-2-pentanone	20.0	20.6	103	63-128	
Methyl tert-butyl ether	10.0	10.5	105	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0501.D

Lab ID: LCS 240-80957/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.8	104	83-113	
Naphthalene	10.0	7.96	80	32-141	
n-Butylbenzene	10.0	10.6	106	66-125	
n-Propylbenzene	10.0	10.7	107	74-121	
o-Xylene	10.0	10.9	109	83-113	
p-Isopropyltoluene	10.0	11.0	110	74-120	
sec-Butylbenzene	10.0	10.3	103	70-117	
Styrene	10.0	9.73	97	79-114	
tert-Butyl alcohol	200	191	96	70-130	
tert-Butylbenzene	10.0	10.1	101	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.8	108	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.12	91	68-118	
Tetrachloroethene	10.0	9.56	96	79-114	
Toluene	10.0	9.90	99	84-111	
trans-1,2-Dichloroethene	10.0	10.6	106	83-117	
trans-1,3-Dichloropropene	10.0	8.36	84	58-117	
1,2,3-Trichlorobenzene	10.0	9.14	91	54-126	
1,2,4-Trichlorobenzene	10.0	8.69	87	48-135	
1,1,1-Trichloroethane	10.0	10.5	105	74-118	
Trichloroethene	10.0	9.91	99	76-117	
Trichlorofluoromethane	10.0	9.63	96	49-157	
1,2,3-Trichloropropane	10.0	9.06	91	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.0	120	74-151	
1,2,3-Trimethylbenzene	10.0	10.4	104	70-130	
1,2,4-Trimethylbenzene	10.0	10.7	107	76-120	
Vinyl acetate	10.0	7.51	75	46-161	
Vinyl chloride	10.0	9.15	92	53-127	
Xylenes, Total	30.0	31.7	106	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/09/2013 09:53

Analysis Batch Number: 81120 End Date: 04/09/2013 20:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-81120/1		04/09/2013 09:53	1	BFB106A.D	DB-624 0.18(mm)
CCVIS 240-81120/2		04/09/2013 10:18	1	UXC0553.D	DB-624 0.18(mm)
CCV 240-81120/3		04/09/2013 10:40	1	UXC0554.D	DB-624 0.18(mm)
LCS 240-81120/4		04/09/2013 11:03	1	UXC0555.D	DB-624 0.18(mm)
MB 240-81120/5		04/09/2013 11:48	1	UXC0557.D	DB-624 0.18(mm)
ZZZZZ		04/09/2013 12:11	7500000		DB-624 0.18(mm)
240-22680-7	MRC-MW-69A-040113	04/09/2013 12:34	1	UXC0559.D	DB-624 0.18(mm)
240-22680-8	MRC-MW-69B-040113	04/09/2013 12:56	1	UXC0560.D	DB-624 0.18(mm)
ZZZZZ		04/09/2013 13:19	20		DB-624 0.18(mm)
ZZZZZ		04/09/2013 13:42	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 14:05	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 14:27	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 14:50	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 15:12	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 15:35	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 15:57	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 16:20	55.56		DB-624 0.18(mm)
ZZZZZ		04/09/2013 16:43	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 17:06	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 17:28	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 17:51	28.57		DB-624 0.18(mm)
ZZZZZ		04/09/2013 18:13	33.33		DB-624 0.18(mm)
ZZZZZ		04/09/2013 18:36	166.67		DB-624 0.18(mm)
ZZZZZ		04/09/2013 18:58	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 19:20	3.33		DB-624 0.18(mm)
240-22783-B-2 MS		04/09/2013 19:42	3.33	UXC0578.D	DB-624 0.18(mm)
240-22783-B-2 MSD		04/09/2013 20:05	3.33	UXC0579.D	DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: BFB106A.D BFB Injection Date: 04/09/2013

Instrument ID: A3UX15 BFB Injection Time: 09:53

Analysis Batch No.: 81120

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.0	
75	30.0 - 60.0 % of mass 95	48.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.5	(0.5)1
174	50.0 - 120.00 % of mass 95	92.5	
175	5.0 - 9.0 % of mass 174	6.4	(6.9)1
176	95.0 - 101.0 % of mass 174	90.5	(97.8)1
177	5.0 - 9.0 % of mass 176	5.1	(5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81120/2	UXC0553.D	04/09/2013	10:18
	CCV 240-81120/3	UXC0554.D	04/09/2013	10:40
	LCS 240-81120/4	UXC0555.D	04/09/2013	11:03
	MB 240-81120/5	UXC0557.D	04/09/2013	11:48
MRC-MW-69A-040113	240-22680-7	UXC0559.D	04/09/2013	12:34
MRC-MW-69B-040113	240-22680-8	UXC0560.D	04/09/2013	12:56
	240-22783-B-2 MS	UXC0578.D	04/09/2013	19:42
	240-22783-B-2 MSD	UXC0579.D	04/09/2013	20:05

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.4443		1.00	0.0100	13.7	50.0
Chloromethane	Ave	0.5133	0.5569	0.1000	1.00	0.0100	8.5	50.0
Vinyl chloride	Ave	0.5765	0.6443		1.00	0.0100	11.8	20.0
Bromomethane	Ave	0.3951	0.4492		1.00	0.0100	13.7	50.0
Chloroethane	Ave	0.3438	0.4113		1.00	0.0100	19.6	50.0
Trichlorofluoromethane	Ave	0.5693	0.5459		1.00	0.0100	-4.1	50.0
Acrolein	Qua		0.0522		20.0	0.100	40.5	50.0
1,1-Dichloroethene	Ave	0.3445	0.4124		1.00	0.0100	19.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3122		1.00	0.0100	18.6	50.0
Acetone	Qua		0.0794		10.0	0.0200	7.1	50.0
Iodomethane	Ave	0.4958	0.6073		1.00	0.0100	22.5	50.0
Carbon disulfide	Ave	0.7463	0.9707		1.00	0.0100	30.1	50.0
Acetonitrile	Ave	0.0282	0.0328		20.0	0.100	16.5	50.0
Methyl acetate	Ave	0.1586	0.1592		10.0	0.0200	0.3	50.0
Methylene Chloride	Lin1		0.4876		1.00	0.0100	29.1	50.0
tert-Butyl alcohol	Ave	0.0097	0.0094		50.0	0.200	-2.4	50.0
Acrylonitrile	Ave	0.0871	0.0984		20.0	0.0200	12.9	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.4026		1.00	0.0100	12.8	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6773		1.00	0.0100	7.3	50.0
Hexane	Ave	0.0668	0.0796		1.00	0.0100	19.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.6212	0.1000	1.00	0.0100	8.1	50.0
Vinyl acetate	Ave	0.0383	0.0338		2.00	0.0100	-11.8	50.0
2,2-Dichloropropane	Ave	0.2770	0.2806		1.00	0.0100	1.3	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4009		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0913		10.0	0.0200	0.3	50.0
Bromochloromethane	Ave	0.1662	0.1784		1.00	0.0100	7.3	50.0
Tetrahydrofuran	Lin1		0.0526		5.00	0.0100	5.3	50.0
Chloroform	Ave	0.5671	0.5980		1.00	0.0100	5.4	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4423		1.00	0.0100	7.4	50.0
Cyclohexane	Ave	0.5423	0.6641		1.00	0.0100	22.5	50.0
1,1-Dichloropropene	Ave	0.4381	0.4574		1.00	0.0100	4.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3342		1.00	0.0100	3.0	50.0
Benzene	Ave	1.387	1.429		1.00	0.0100	3.0	50.0
1,2-Dichloroethane	Ave	0.4040	0.3982		1.00	0.0100	-1.4	50.0
Trichloroethene	Ave	0.3397	0.3372		1.00	0.0100	-0.7	50.0
Methylcyclohexane	Ave	0.5006	0.5884		1.00	0.0100	17.5	50.0
1,2-Dichloropropane	Ave	0.3010	0.3181		1.00	0.0100	5.7	20.0
Dibromomethane	Ave	0.1618	0.1588		1.00	0.0100	-1.8	50.0
1,4-Dioxane	Lin1		0.0020		50.0	0.500	-22.8	50.0
Bromodichloromethane	Ave	0.3013	0.2944		1.00	0.0100	-2.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1011		10.0	0.0200	-15.3	50.0
cis-1,3-Dichloropropene	Lin1		0.2773		1.00	0.0100	-22.3	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1629		10.0	0.0200	6.4	50.0
Toluene	Ave	2.028	2.061		1.00	0.0100	1.6	20.0
trans-1,3-Dichloropropene	Lin1		0.2921		1.00	0.0100	-27.9	50.0
Ethyl methacrylate	Lin1		0.3349		1.00	0.0100	-11.5	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3077		1.00	0.0100	-4.8	50.0
Tetrachloroethene	Ave	0.3905	0.3768		1.00	0.0100	-3.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5522		1.00	0.0100	-6.4	50.0
2-Hexanone	Ave	0.1436	0.1498		10.0	0.0200	4.4	50.0
Dibromochloromethane	Lin1		0.2358		1.00	0.0100	-23.2	50.0
1,2-Dibromoethane	Ave	0.3048	0.2968		1.00	0.0100	-2.6	50.0
Chlorobenzene	Ave	1.276	1.254	0.3000	1.00	0.0100	-1.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3685		1.00	0.0100	4.3	50.0
Ethylbenzene	Ave	0.6700	0.7099		1.00	0.0100	6.0	20.0
m-Xylene & p-Xylene	Ave	1.626	1.790		2.00	0.0200	10.1	50.0
o-Xylene	Ave	0.8173	0.9196		1.00	0.0100	12.5	50.0
Styrene	Lin1		1.430		1.00	0.0100	-1.7	50.0
Bromoform	Lin1		0.1183	0.1000	1.00	0.0100	-23.3	50.0
Isopropylbenzene	Ave	1.984	2.250		1.00	0.0100	13.4	50.0
Bromobenzene	Ave	0.9263	0.7965		1.00	0.0100	-14.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6051	0.3000	1.00	0.0100	-12.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1884		1.00	0.0100	-14.6	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0865		1.00	0.0100	12.8	50.0
n-Propylbenzene	Ave	0.9249	0.9024		1.00	0.0100	-2.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8507		1.00	0.0100	-3.8	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.845		1.00	0.0100	4.2	50.0
4-Chlorotoluene	Ave	2.918	2.787		1.00	0.0100	-4.5	50.0
tert-Butylbenzene	Ave	2.268	2.298		1.00	0.0100	1.3	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.909		1.00	0.0100	2.0	50.0
sec-Butylbenzene	Ave	3.298	3.485		1.00	0.0100	5.7	50.0
1,3-Dichlorobenzene	Ave	1.741	1.662		1.00	0.0100	-4.5	50.0
p-Isopropyltoluene	Ave	2.821	2.913		1.00	0.0100	3.3	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.595		1.00	0.0100	-4.7	50.0
n-Butylbenzene	Ave	2.489	2.696		1.00	0.0100	8.3	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0538		2.00	0.0100	-21.4	50.0
1,3,5-Trichlorobenzene	Ave	1.071	1.050		1.00	0.0100	-1.9	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7006		1.00	0.0100	-7.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4850		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.168		1.00	0.0100	-23.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.5537		1.00	0.0100	-15.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2928		0.00833	0.00890	-6.4	50.0
Toluene-d8 (Surr)	Ave	1.667	1.609		0.00859	0.00890	-3.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5606		0.00962	0.00890	8.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCV 240-81120/3 Calibration Date: 04/09/2013 10:40

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0554.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.9457		2.00	0.0100	10.2	50.0
Ethyl ether	Ave	0.3178	0.3112		2.00	0.0100	-2.1	50.0
3-Chloro-1-propene	Ave	0.1476	0.1654		2.00	0.0100	12.1	50.0
Diisopropyl ether	Ave	0.2893	0.3105		10.0	0.0500	7.3	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.5309		2.00	0.0100	4.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6680		5.00	0.0100	4.2	50.0
Ethyl acetate	Ave	0.1470	0.1396		4.00	0.0200	-5.0	50.0
Propionitrile	Ave	0.0282	0.0312		4.00	0.0200	10.7	50.0
Methacrylonitrile	Ave	0.1169	0.1155		2.00	0.0100	-1.2	50.0
Isobutyl alcohol	Ave	0.0041	0.0048		50.0	0.200	16.1	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.4930		5.00	0.0100	1.6	50.0
n-Heptane	Ave	0.0670	0.0680		1.00	0.0100	1.5	50.0
n-Butanol	Ave	0.0027	0.0028		50.0	0.200	4.3	50.0
Methyl methacrylate	Ave	0.1349	0.1214		2.00	0.0100	-10.0	50.0
2-Nitropropane	Ave	0.0194	0.0167		2.00	0.0200	-13.9	50.0
Cyclohexanone	Ave	0.0865	0.0278		20.0	0.100	-67.9*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.350		0.0110	0.0100	10.0	50.0
2-Methylnaphthalene	Qua		0.2012		5.00	0.0200	-49.3	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: UXC0557.D Lab Sample ID: MB 240-81120/5

Matrix: Water Heated Purge: (Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/09/2013 11:48

GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81120/4	UXC0555.D	04/09/2013 11:03
MRC-MW-69A-040113	240-22680-7	UXC0559.D	04/09/2013 12:34
MRC-MW-69B-040113	240-22680-8	UXC0560.D	04/09/2013 12:56
	240-22783-B-2 MS	UXC0578.D	04/09/2013 19:42
	240-22783-B-2 MSD	UXC0579.D	04/09/2013 20:05

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81120/5

Matrix: Water | Lab File ID: UXC0557.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0555.D

Lab ID: LCS 240-81120/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.4	92	43-136	
Benzene	10.0	10.2	102	83-112	
Bromobenzene	10.0	9.26	93	76-115	
Bromochloromethane	10.0	9.68	97	77-120	
Bromodichloromethane	10.0	9.90	99	72-121	
Bromoform	10.0	7.03	70	40-131	
Bromomethane	10.0	7.22	72	11-185	
2-Butanone	20.0	19.2	96	60-126	
Carbon disulfide	10.0	11.4	114	62-142	
Carbon tetrachloride	10.0	9.86	99	66-128	
Chlorobenzene	10.0	9.50	95	85-110	
Chloroethane	10.0	8.48	85	25-153	
2-Chloroethyl vinyl ether	10.0	8.54 J	85	52-131	
Chloroform	10.0	10.4	104	79-117	
Chloromethane	10.0	8.11	81	44-126	
2-Chlorotoluene	10.0	9.79	98	76-116	
4-Chlorotoluene	10.0	9.98	100	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.00	80	61-115	
Dibromochloromethane	10.0	7.54	75	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.38	84	42-136	
1,2-Dibromoethane	10.0	9.42	94	79-113	
Dibromomethane	10.0	10.1	101	81-120	
1,2-Dichlorobenzene	10.0	9.75	97	81-110	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,4-Dichlorobenzene	10.0	9.55	95	82-110	
Dichlorodifluoromethane	10.0	6.54	65	19-129	
1,1-Dichloroethane	10.0	10.5	105	82-115	
1,2-Dichloroethane	10.0	9.94	99	71-127	
1,1-Dichloroethene	10.0	10.9	109	78-131	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichloropropane	10.0	9.49	95	79-116	
2,2-Dichloropropane	10.0	9.31	93	50-129	
1,1-Dichloropropene	10.0	10.3	103	83-114	
Diisopropyl ether	10.0	9.49	95	77-118	
Ethylbenzene	10.0	10.1	101	83-112	
Hexachlorobutadiene	10.0	8.28	83	36-134	
2-Hexanone	20.0	20.2	101	55-133	
Isopropylbenzene	10.0	10.3	103	75-114	
Methylene Chloride	10.0	10.8	108	66-131	
4-Methyl-2-pentanone	20.0	20.2	101	63-128	
Methyl tert-butyl ether	10.0	9.75	98	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0555.D

Lab ID: LCS 240-81120/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.5	102	83-113	
Naphthalene	10.0	7.75	77	32-141	
n-Butylbenzene	10.0	11.1	111	66-125	
n-Propylbenzene	10.0	10.6	106	74-121	
o-Xylene	10.0	10.1	101	83-113	
p-Isopropyltoluene	10.0	11.0	110	74-120	
sec-Butylbenzene	10.0	10.6	106	70-117	
Styrene	10.0	9.36	94	79-114	
tert-Butyl alcohol	200	196	98	70-130	
tert-Butylbenzene	10.0	10.4	104	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.56	96	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.20	92	68-118	
Tetrachloroethene	10.0	9.45	95	79-114	
Toluene	10.0	9.76	98	84-111	
trans-1,2-Dichloroethene	10.0	10.1	101	83-117	
trans-1,3-Dichloropropene	10.0	7.74	77	58-117	
1,2,3-Trichlorobenzene	10.0	8.55	85	54-126	
1,2,4-Trichlorobenzene	10.0	8.74	87	48-135	
1,1,1-Trichloroethane	10.0	9.87	99	74-118	
Trichloroethene	10.0	9.94	99	76-117	
Trichlorofluoromethane	10.0	7.81	78	49-157	
1,2,3-Trichloropropane	10.0	8.94	89	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.8	118	74-151	
1,2,3-Trimethylbenzene	10.0	10.3	103	70-130	
1,2,4-Trimethylbenzene	10.0	10.7	107	76-120	
Vinyl acetate	10.0	7.42	74	46-161	
Vinyl chloride	10.0	8.50	85	53-127	
Xylenes, Total	30.0	30.6	102	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0578.D

Lab ID: 240-22783-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	66.6	17 U	62.3	94	33-145	
Benzene	33.3	3.3 U	33.6	101	72-121	
Bromobenzene	33.3	3.3 U	27.8	83	71-116	
Bromochloromethane	33.3	3.3 U	33.4	100	73-121	
Bromodichloromethane	33.3	3.3 U	31.4	94	67-120	
Bromoform	33.3	3.3 U	24.6	74	32-128	
Bromomethane	33.3	3.3 U	27.2	82	10-186	
2-Butanone	66.6	17 U	66.9	100	54-129	
Carbon disulfide	33.3	3.3 U	35.8	108	57-147	
Carbon tetrachloride	33.3	3.3 U	30.3	91	59-129	
Chlorobenzene	33.3	3.3 U	31.6	95	80-110	
Chloroethane	33.3	3.3 U	31.6	95	21-165	
2-Chloroethyl vinyl ether	33.3	33 U	33 U	0	10-150	F
Chloroform	33.3	3.3 U	33.3	100	76-118	
Chloromethane	33.3	3.3 U	29.3	88	33-132	
2-Chlorotoluene	33.3	3.3 U	29.0	87	69-117	
4-Chlorotoluene	33.3	3.3 U	29.3	88	71-116	
cis-1,2-Dichloroethene	33.3	10	43.4	99	70-120	
cis-1,3-Dichloropropene	33.3	3.3 U	23.0	69	51-110	
Dibromochloromethane	33.3	3.3 U	25.6	77	56-118	
1,2-Dibromo-3-Chloropropane	33.3	17 U	27.8	83	32-139	
1,2-Dibromoethane	33.3	3.3 U	33.4	100	74-113	
Dibromomethane	33.3	3.3 U	34.8	105	77-121	
1,2-Dichlorobenzene	33.3	3.3 U	30.0	90	75-111	
1,3-Dichlorobenzene	33.3	3.3 U	29.6	89	73-110	
1,4-Dichlorobenzene	33.3	3.3 U	28.8	86	75-110	
Dichlorodifluoromethane	33.3	3.3 U	20.1	60	17-128	
1,1-Dichloroethane	33.3	4.9	39.9	105	79-116	
1,2-Dichloroethane	33.3	0.77 J	33.1	97	68-129	
1,1-Dichloroethene	33.3	52	81.8	91	74-135	
1,2-Dichloropropane	33.3	3.3 U	33.1	99	78-115	
1,3-Dichloropropane	33.3	3.3 U	33.8	101	74-118	
2,2-Dichloropropane	33.3	3.3 U	27.5	82	38-127	
1,1-Dichloropropene	33.3	3.3 U	32.5	98	80-114	
Diisopropyl ether	33.3	17 U	30.9	93	73-118	
Ethylbenzene	33.3	3.3 U	33.0	99	75-116	
Hexachlorobutadiene	33.3	3.3 U	23.5	70	27-132	
2-Hexanone	66.6	17 U	72.7	109	47-139	
Isopropylbenzene	33.3	3.3 U	33.6	101	68-116	
Methylene Chloride	33.3	1.4 J	37.4	108	63-128	
4-Methyl-2-pentanone	66.6	17 U	68.5	103	56-131	
Methyl tert-butyl ether	33.3	3.3 U	34.1	102	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0578.D

Lab ID: 240-22783-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	66.6	6.7 U	68.0	102	75-117	
Naphthalene	33.3	3.3 U	24.6	74	15-158	
n-Butylbenzene	33.3	3.3 U	31.9	96	56-127	
n-Propylbenzene	33.3	3.3 U	29.8	90	64-124	
o-Xylene	33.3	3.3 U	34.8	105	76-116	
p-Isopropyltoluene	33.3	3.3 U	31.8	95	64-122	
sec-Butylbenzene	33.3	3.3 U	29.7	89	60-119	
Styrene	33.3	3.3 U	31.2	94	71-117	
tert-Butyl alcohol	666	67 U	700	105	70-130	
tert-Butylbenzene	33.3	3.3 U	30.0	90	61-119	
1,1,1,2-Tetrachloroethane	33.3	3.3 U	32.1	96	64-118	
1,1,2,2-Tetrachloroethane	33.3	3.3 U	29.4	88	63-122	
Tetrachloroethene	33.3	3.3 U	30.7	92	70-117	
Toluene	33.3	3.3 U	32.4	97	78-114	
trans-1,2-Dichloroethene	33.3	3.3 U	33.6	101	80-119	
trans-1,3-Dichloropropene	33.3	3.3 U	25.8	77	46-116	
1,2,3-Trichlorobenzene	33.3	3.3 U	27.8	84	45-129	
1,2,4-Trichlorobenzene	33.3	3.3 U	26.0	78	38-138	
1,1,1-Trichloroethane	33.3	3.3 U	32.6	98	68-121	
Trichloroethene	33.3	86	114	83	66-120	
Trichlorofluoromethane	33.3	3.3 U	26.7	80	46-157	
1,2,3-Trichloropropane	33.3	3.3 U	29.6	89	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	33.3	3.3 U	36.6	110	70-152	
1,2,3-Trimethylbenzene	33.3	17 U	31.4	94	70-130	
1,2,4-Trimethylbenzene	33.3	3.3 U	30.8	93	67-124	
Vinyl acetate	33.3	6.7 U	25.1	75	43-157	
Vinyl chloride	33.3	3.3 U	30.3	91	49-130	
Xylenes, Total	99.9	6.7 U	103	103	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0579.D

Lab ID: 240-22783-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	66.6	63.9	96	3	30	33-145	
Benzene	33.3	33.7	101	0	30	72-121	
Bromobenzene	33.3	29.4	88	6	30	71-116	
Bromochloromethane	33.3	31.9	96	5	30	73-121	
Bromodichloromethane	33.3	32.9	99	5	30	67-120	
Bromoform	33.3	25.2	76	2	30	32-128	
Bromomethane	33.3	26.4	79	3	30	10-186	
2-Butanone	66.6	65.1	98	3	30	54-129	
Carbon disulfide	33.3	37.4	112	4	30	57-147	
Carbon tetrachloride	33.3	31.5	95	4	30	59-129	
Chlorobenzene	33.3	31.7	95	0	30	80-110	
Chloroethane	33.3	31.0	93	2	30	21-165	
2-Chloroethyl vinyl ether	33.3	33 U	0	NC	30	10-150	F
Chloroform	33.3	34.9	105	5	30	76-118	
Chloromethane	33.3	28.6	86	3	30	33-132	
2-Chlorotoluene	33.3	30.0	90	3	30	69-117	
4-Chlorotoluene	33.3	30.6	92	5	30	71-116	
cis-1,2-Dichloroethene	33.3	43.1	98	1	30	70-120	
cis-1,3-Dichloropropene	33.3	25.9	78	12	30	51-110	
Dibromochloromethane	33.3	26.2	79	2	30	56-118	
1,2-Dibromo-3-Chloropropane	33.3	28.9	87	4	30	32-139	
1,2-Dibromoethane	33.3	31.9	96	5	30	74-113	
Dibromomethane	33.3	34.5	104	1	30	77-121	
1,2-Dichlorobenzene	33.3	31.9	96	6	30	75-111	
1,3-Dichlorobenzene	33.3	31.0	93	5	30	73-110	
1,4-Dichlorobenzene	33.3	30.5	92	6	30	75-110	
Dichlorodifluoromethane	33.3	21.2	64	5	30	17-128	
1,1-Dichloroethane	33.3	39.5	104	1	30	79-116	
1,2-Dichloroethane	33.3	34.3	101	3	30	68-129	
1,1-Dichloroethene	33.3	80.6	87	1	30	74-135	
1,2-Dichloropropane	33.3	34.3	103	4	30	78-115	
1,3-Dichloropropane	33.3	32.5	97	4	30	74-118	
2,2-Dichloropropane	33.3	28.0	84	2	30	38-127	
1,1-Dichloropropene	33.3	33.2	100	2	30	80-114	
Diisopropyl ether	33.3	32.1	96	4	30	73-118	
Ethylbenzene	33.3	31.9	96	3	30	75-116	
Hexachlorobutadiene	33.3	24.1	72	3	30	27-132	
2-Hexanone	66.6	75.5	113	4	30	47-139	
Isopropylbenzene	33.3	33.4	100	0	30	68-116	
Methylene Chloride	33.3	38.4	111	3	30	63-128	
4-Methyl-2-pentanone	66.6	72.3	109	5	30	56-131	
Methyl tert-butyl ether	33.3	33.4	100	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0579.D

Lab ID: 240-22783-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	66.6	66.4	100	2	30	75-117	
Naphthalene	33.3	26.7	80	8	30	15-158	
n-Butylbenzene	33.3	32.1	97	1	30	56-127	
n-Propylbenzene	33.3	30.6	92	3	30	64-124	
o-Xylene	33.3	33.1	99	5	30	76-116	
p-Isopropyltoluene	33.3	32.3	97	2	30	64-122	
sec-Butylbenzene	33.3	31.3	94	5	30	60-119	
Styrene	33.3	31.0	93	1	30	71-117	
tert-Butyl alcohol	666	719	108	3	30	70-130	
tert-Butylbenzene	33.3	31.7	95	5	30	61-119	
1,1,1,2-Tetrachloroethane	33.3	32.1	96	0	30	64-118	
1,1,2,2-Tetrachloroethane	33.3	32.1	96	9	30	63-122	
Tetrachloroethene	33.3	31.2	94	2	30	70-117	
Toluene	33.3	32.6	98	1	30	78-114	
trans-1,2-Dichloroethene	33.3	32.9	99	2	30	80-119	
trans-1,3-Dichloropropene	33.3	26.7	80	4	30	46-116	
1,2,3-Trichlorobenzene	33.3	29.5	89	6	30	45-129	
1,2,4-Trichlorobenzene	33.3	27.4	82	5	30	38-138	
1,1,1-Trichloroethane	33.3	32.7	98	0	30	68-121	
Trichloroethene	33.3	114	82	0	30	66-120	
Trichlorofluoromethane	33.3	29.0	87	8	30	46-157	
1,2,3-Trichloropropane	33.3	30.8	92	4	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	33.3	35.9	108	2	30	70-152	
1,2,3-Trimethylbenzene	33.3	32.1	97	2	30	70-130	
1,2,4-Trimethylbenzene	33.3	32.0	96	4	30	67-124	
Vinyl acetate	33.3	26.8	80	6	30	43-157	
Vinyl chloride	33.3	29.3	88	3	30	49-130	
Xylenes, Total	99.9	99.5	100	3	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-80957/2		1377975	4.66	913159	7.30	590462	9.51
CCVIS 240-81120/2		1300981	4.66	869004	7.30	586844	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVIS 240-80957/2 Date Analyzed: 04/08/2013 10:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0498.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1377975	4.66	913159	7.30	590462	9.51
UPPER LIMIT		2755950	5.16	1826318	7.80	1180924	10.01
LOWER LIMIT		688988	4.16	456580	6.80	295231	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-80957/3		1272799	4.66	878048	7.30	462017	9.51
LCS 240-80957/5		1344583	4.66	912132	7.30	572810	9.51
MB 240-80957/6		1173491	4.66	855001	7.30	418330	9.51
MRL 240-80957/8		1261685	4.66	863158	7.30	455651	9.51
240-22680-1	TB-040113	1282555	4.66	871277	7.30	385490	9.51
240-22680-2	MRC-MW14B-040113	1184404	4.66	836365	7.30	385152	9.51
240-22680-3	MRC-MW14A-040113	1223943	4.66	835259	7.30	391829	9.51
240-22680-4	MRC-MW106B/C-040113	1049823	4.66	760437	7.30	388045	9.51
240-22680-5	MRC-MW107B/C-040113	1030354	4.66	756148	7.30	371350	9.51
240-22680-6	MRC-MW-109B-040113	1234332	4.66	826937	7.30	406554	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVIS 240-81120/2 Date Analyzed: 04/09/2013 10:18

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0553.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1300981	4.66	869004	7.30	586844	9.51
UPPER LIMIT		2601962	5.16	1738008	7.80	1173688	10.01
LOWER LIMIT		650491	4.16	434502	6.80	293422	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-81120/3		1323357	4.66	881467	7.30	458162	9.51
LCS 240-81120/4		1462215	4.66	998379	7.30	589209	9.51
MB 240-81120/5		1320818	4.66	958837	7.30	433080	9.51
240-22680-7	MRC-MW-69A-040113	1303710	4.66	882486	7.30	425000	9.51
240-22680-8	MRC-MW-69B-040113	1252646	4.66	848280	7.30	410558	9.51
240-22783-B-2 MS		1338454	4.66	848563	7.30	573880	9.51
240-22783-B-2 MSD		1371477	4.66	918783	7.30	583312	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

SDG 240-22680

SAMPLE ID MRC-MW14B-040113

SAMPLE CALC

IS AREA	DILUTION	COMPOUND OF INTEREST / IS AMOUNT (NG)	Final Volume (ML)	AVE RRF	CONCENTRATION ug/L
1184404	100	924538 / 10	5	0.3397	2297.89

Sample Volume (ML)

5

Trichloroethene = 2,300 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX15\20130408-18643.b\UXC0516.D		
Lims ID:	240-22680-B-2	Client ID:	MRC-MW14B-040113
Inject. Date:	08-Apr-2013 18:58:30	Dil. Factor:	100.0000
Sample Type:	Client		
Sample ID:	240-0018643-019		
Misc. Info.:	C30408A,8260LLUX15,,43582		
Operator:	43582	Instrument ID:	A3UX15
Purge Vol:	5.000 mL	ALS Bottle#:	20
Lims Batch ID:	80957	Lims Sample ID:	19
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX15\20130408-18643.b\8260_15.m		
Last Update:	09-Apr-2013 07:49:36	Calib Date:	04-Apr-2013 16:10:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX15\20130404-18552.b\UXC0384.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK018		
First Level Reviewer: evansle		Date:	09-Apr-2013 07:38:36

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	4.656	4.656	0.0	99	1184404	10.0	
* 2 Chlorobenzene-d5	117	7.301	7.301	0.0	83	836365	10.0	
* 3 1,4-Dichlorobenzene-d4	152	9.506	9.506	0.0	95	385152	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.111	4.111	0.0	63	291290	8.44	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.383	4.384	-0.001	0	354209	9.56	
$ 7 Toluene-d8 (Surr)	98	6.008	6.008	0.0	94	1091785	7.83	
$ 131 4-Bromofluorobenzene (Surr)	95	8.403	8.392	0.011	94	335492	7.73	
139 C6-C12	1		0.000					
140 C6-C10	1		0.000					
134 Chlorodifluoromethane TIC	1		0.000					
143 1,3-Butadiene TIC	1		0.000					
141 Isobutylene TIC	1		0.000					
142 1,3-Diethylbenzene TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.158					
13 Chloromethane	50		1.265					9
14 Vinyl chloride	62		1.348					9
15 Bromomethane	94		1.585					
16 Chloroethane	64		1.656					9
17 Dichlorofluoromethane	67		1.810					9
18 Trichlorofluoromethane	101		1.858					9
19 Ethyl ether	59		2.071					
20 Acrolein	56		2.178					
21 1,1-Dichloroethene	96	2.261	2.261	0.0	90	220532	5.41	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.273					9
22 Acetone	43		2.308					
24 Iodomethane	142		2.379					
26 Carbon disulfide	76		2.427					
27 Acetonitrile	41		2.534					
29 3-Chloro-1-propene	76		2.557					
28 Methyl acetate	43		2.581					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
30 Methylene Chloride	84	2.664	2.652	0.012	84	50226	0.2366	
31 2-Methyl-2-propanol	59		2.771					
25 Methylal	45		2.856					
32 Acrylonitrile	53		2.866					9
33 trans-1,2-Dichloroethene	96		2.878					
34 Methyl tert-butyl ether	73		2.889					
35 Hexane	86		3.115					
36 1,1-Dichloroethane	63	3.233	3.233	0.0	80	30713	0.4511	
37 Vinyl acetate	86		3.281					
38 Isopropyl ether	87		3.293					
39 2-Chloro-1,3-butadiene	53		3.304					9
40 Tert-butyl ethyl ether	59		3.589					
42 cis-1,2-Dichloroethene	96	3.707	3.708	-0.001	70	24185	0.5418	
43 2,2-Dichloropropane	77		3.708					
41 2-Butanone (MEK)	43		3.731					9
44 Propionitrile	54		3.779					
45 Ethyl acetate	43		3.779					9
46 Methacrylonitrile	41		3.897					
47 Chlorobromomethane	128		3.909					9
48 Tetrahydrofuran	42		3.945					9
49 Chloroform	83		3.969					9
50 1,1,1-Trichloroethane	97		4.123					9
51 Cyclohexane	56		4.158					9
53 Carbon tetrachloride	117		4.253					
52 1,1-Dichloropropene	75		4.253					
54 Isobutyl alcohol	41		4.372					9
55 Benzene	78	4.431	4.431	0.0	58	58481	0.3559	
56 1,2-Dichloroethane	62		4.443					
57 Tert-amyl methyl ether	73		4.526					9
58 n-Heptane	100		4.656					9
59 n-Butanol	56		4.929					
60 Trichloroethene	130	4.964	4.965	-0.001	95	924538	23.0	
61 Ethyl acrylate	55		5.071					9
63 Methylcyclohexane	83		5.131					
62 1,2-Dichloropropane	63		5.154					
65 Dibromomethane	93		5.261					
64 Methyl methacrylate	41		5.261					
66 1,4-Dioxane	88		5.285					
67 Dichlorobromomethane	83		5.392					
68 2-Nitropropane	41		5.593					
69 2-Chloroethyl vinyl ether	63		5.652					
70 cis-1,3-Dichloropropene	75		5.783					
71 4-Methyl-2-pentanone (MIBK)	43		5.925					9
72 Toluene	91		6.067					9
73 trans-1,3-Dichloropropene	75		6.269					
74 Ethyl methacrylate	69		6.352					9
75 1,1,2-Trichloroethane	97		6.423					9
77 Tetrachloroethene	164		6.554					9
76 1,3-Dichloropropane	76		6.577					9
78 2-Hexanone	43		6.660					9
80 Tetrahydrothiophene	60		6.767					
79 Chlorodibromomethane	129		6.779					

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW14B-040113	240-22680-2	66	73	61	70	64	59
MRC-MW14A-040113	240-22680-3	49	51	60	62	60	70
MRC-MW-69A-040113	240-22680-7	62	63	61	61	75	57
MRC-MW-69B-040113	240-22680-8	52	52	61	62	58	68
	MB 240-80724/9-A	60	60	68	73	67	85
	LCS 240-80724/10-A	55	54	67	70	64	76

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/03/2013 14:01

Analysis Batch Number: 80408 End Date: 04/03/2013 20:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-80408/1		04/03/2013 14:01	1	30403001.D	DB-624 0.18(mm)
STD5 240-80408/2 IC		04/03/2013 14:18	1	30403002.D	DB-624 0.18(mm)
STD4 240-80408/3 IC		04/03/2013 14:40	1	30403003.D	DB-624 0.18(mm)
STD3 240-80408/4 IC		04/03/2013 15:00	1	30403004.D	DB-624 0.18(mm)
STD2 240-80408/5 IC		04/03/2013 15:19	1	30403005.D	DB-624 0.18(mm)
STD1 240-80408/6 IC		04/03/2013 15:37	1	30403006.D	DB-624 0.18(mm)
STD9 240-80408/7 IC		04/03/2013 15:56	1	30403007.D	DB-624 0.18(mm)
STD8 240-80408/8 IC		04/03/2013 16:14	1	30403008.D	DB-624 0.18(mm)
STD7 240-80408/9 IC		04/03/2013 16:33	1	30403009.D	DB-624 0.18(mm)
STD6 240-80408/10 ICIS		04/03/2013 16:51	1	30403010.D	DB-624 0.18(mm)
ICV 240-80408/11		04/03/2013 17:10	1	30403011.D	DB-624 0.18(mm)
STD9 240-80408/13 IC		04/03/2013 17:47	1		DB-624 0.18(mm)
STD8 240-80408/14 IC		04/03/2013 18:06	1		DB-624 0.18(mm)
STD7 240-80408/15 IC		04/03/2013 18:24	1		DB-624 0.18(mm)
STD6 240-80408/16 IC		04/03/2013 18:43	1		DB-624 0.18(mm)
STD5 240-80408/17 IC		04/03/2013 19:02	1		DB-624 0.18(mm)
STD4 240-80408/18 IC		04/03/2013 19:20	1		DB-624 0.18(mm)
STD3 240-80408/19 IC		04/03/2013 19:39	1		DB-624 0.18(mm)
STD2 240-80408/20 IC		04/03/2013 19:57	1		DB-624 0.18(mm)
ICV 240-80408/21		04/03/2013 20:16	1		DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: 30403001.D DFTPP Injection Date: 04/03/2013

Instrument ID: A4HP10 DFTPP Injection Time: 14:01

Analysis Batch No.: 80408

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	40.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	39.1	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	44.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	27.9	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	11.3	
442	40.0 - 110.0% of mass 198	62.0	
443	15.0 - 24.0% of mass 442	11.8	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-80408/2	30403002.D	04/03/2013	14:18
	STD4 240-80408/3	30403003.D	04/03/2013	14:40
	STD3 240-80408/4	30403004.D	04/03/2013	15:00
	STD2 240-80408/5	30403005.D	04/03/2013	15:19
	STD1 240-80408/6	30403006.D	04/03/2013	15:37
	STD9 240-80408/7	30403007.D	04/03/2013	15:56
	STD8 240-80408/8	30403008.D	04/03/2013	16:14
	STD7 240-80408/9	30403009.D	04/03/2013	16:33
	STD6 240-80408/10	30403010.D	04/03/2013	16:51
	ICV 240-80408/11	30403011.D	04/03/2013	17:10

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80408/6	30403006.D
Level 2	STD2 240-80408/5	30403005.D
Level 3	STD3 240-80408/4	30403004.D
Level 4	STD4 240-80408/3	30403003.D
Level 5	STD5 240-80408/2	30403002.D
Level 6	STD6 240-80408/10	30403010.D
Level 7	STD7 240-80408/9	30403009.D
Level 8	STD8 240-80408/8	30403008.D
Level 9	STD9 240-80408/7	30403007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.6426	0.6353 0.6548	0.6457 0.6885	0.6856 0.6868	0.6264	Ave		0.6582				3.8		20.0			
N-Nitrosodimethylamine	1.0039	0.9507 0.9851	1.0021 1.0900	1.0596 1.0825	0.9490	Ave		1.0154				5.5		20.0			
Pyridine	1.5853	1.5551 1.6458	1.6196 1.7590	1.7073 1.7275	1.5866	Ave		1.6483				4.5		20.0			
Ethyl methacrylate	1.2312	1.1515 1.2492	1.1800 1.3464	1.2849 1.3238	1.2088	Ave		1.2470				5.5		20.0			
3-Chloropropionitrile	0.9185	0.9431 0.9259	0.9250 0.9809	0.9913 1.0057	0.9031	Ave		0.9492				4.0		20.0			
Malononitrile	1.6904	1.6278 1.7128	1.6591 1.7831	1.8406 1.6629	1.7227	Ave		1.7124				4.1		20.0			
Benzaldehyde	1.3039 0.9564	1.1906 0.8444	1.2471 +++++	1.3335 +++++	1.1568	Ave		1.1475			0.0100	16.0		20.0			
Phenol	2.1174	2.0208 2.1542	2.0813 2.3176	2.2927 2.3264	2.0603	Ave		2.1713			0.8000	5.7		20.0			
Aniline	2.3076	2.0859 2.4609	2.1506 2.6070	2.3948 2.6978	2.3081	Ave		2.3766				8.8		20.0			
Bis(2-chloroethyl)ether	1.3961	1.4007 1.3440	1.3802 1.4796	1.6086 1.4487	1.3281	Ave		1.4233			0.7000	6.3		20.0			
2-Chlorophenol	1.6632	1.5967 1.7219	1.6215 1.8478	1.7697 1.8475	1.6380	Ave		1.7133			0.8000	5.8		20.0			
1,3-Dichlorobenzene	1.4930	1.4657 1.5156	1.4798 1.6291	1.5829 1.6346	1.4722	Ave		1.5341				4.6		20.0			
1,4-Dichlorobenzene	1.8489	1.8214 1.9033	1.8553 2.0291	1.9881 2.0532	1.7899	Ave		1.9112				5.2		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzyl alcohol	1.0379	0.9823 1.0659	1.0033 1.1267	1.1210 1.1570	1.0307	Ave		1.0656				5.9		20.0			
1,2-Dichlorobenzene	1.4346	1.4143 1.4747	1.4128 1.5979	1.5565 1.6194	1.4151	Ave		1.4907				5.9		20.0			
2-Methylphenol	1.5393	1.3850 1.5834	1.4793 1.6849	1.6230 1.7054	1.4780	Ave		1.5598			0.7000	7.1		20.0			
bis (2-chloroisopropyl) ether	2.2331	2.2907 2.2880	2.3009 2.4092	2.5007 2.4199	2.2995	Ave		2.3427				3.8		20.0			
3 & 4 Methylphenol	1.5437	1.4350 1.5965	1.5297 1.7028	1.6607 1.7168	1.5587	Ave		1.5930				6.0		20.0			
N-Nitrosodi-n-propylamine	1.1314	1.0911 1.1668	1.1521 1.2243	1.2393 1.2585	1.1333	Ave		1.1746			0.5000	5.1		20.0			
Acetophenone	1.7364	1.6070 1.7753	1.7272 1.8535	1.8883 1.9267	1.7169	Ave		1.7789			0.0100	5.9		20.0			
Hexachloroethane	0.5304	0.5020 0.5348	0.4934 0.5765	0.5614 0.5767	0.5111	Ave		0.5358			0.3000	6.1		20.0			
Nitrobenzene	0.3959	0.3716 0.3917	0.3824 0.4339	0.4307 0.4373	0.3825	Ave		0.4033			0.2000	6.6		20.0			
Isophorone	0.6379	0.5459 0.6431	0.6172 0.7068	0.6920 0.7156	0.6328	Ave		0.6489			0.4000	8.6		20.0			
2,4-Dimethylphenol	0.4487	0.4069 0.4561	0.4343 0.5069	0.4862 0.5123	0.4330	Ave		0.4605			0.2000	8.2		20.0			
2-Nitrophenol	0.2457	0.2072 0.2516	0.2321 0.2808	0.2531 0.2853	0.2385	Ave		0.2493			0.1000	10.0		20.0			
1,3,5-Trichlorobenzene	0.3439	0.3253 0.3466	0.3327 0.3923	0.3743 0.3998	0.3333	Ave		0.3560				8.1		20.0			
Benzoic acid	0.2169	+++++ 0.2401	0.1416 0.2855	0.1707 0.2884	0.2067	Qua	-0.122	0.1892	0.0021						0.9970		0.9900
Bis(2-chloroethoxy)methane	0.3947	0.3680 0.4003	0.3877 0.4370	0.4260 0.4403	0.3859	Ave		0.4050			0.3000	6.5		20.0			
2,4-Dichlorophenol	0.3495	0.3074 0.3561	0.3323 0.3895	0.3727 0.3981	0.3402	Ave		0.3557			0.2000	8.5		20.0			
1,2,4-Trichlorobenzene	0.3333	0.3167 0.3395	0.3306 0.3737	0.3644 0.3742	0.3206	Ave		0.3441				6.8		20.0			
Naphthalene	1.0645 0.9665	0.9331 0.9548	0.9640 1.0670	1.0534 1.0631	0.9478	Ave		1.0016			0.7000	5.8		20.0			
4-Chloroaniline	0.4403	0.4293 0.4483	0.4657 0.4887	0.5219 0.4860	0.4126	Ave		0.4616			0.0100	7.8		20.0			
Hexachlorobutadiene	0.1997	0.1799 0.2021	0.1964 0.2253	0.2156 0.2297	0.1923	Ave		0.2051			0.0100	8.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2,3-Trichlorobenzene	0.3098	0.2984 0.3128	0.3087 0.3447	0.3358 0.3484	0.3043	Ave		0.3204				6.1		20.0			
Caprolactam	0.1034	0.0791 0.1007	0.0976 0.1148	0.1071 0.1135	0.0987	Ave		0.1019			0.0100	11.0		20.0			
4-Chloro-3-methylphenol	0.3656	0.3173 0.3716	0.3593 0.4116	0.3934 0.4158	0.3557	Ave		0.3738			0.2000	8.7		20.0			
2-Methylnaphthalene	0.6143 0.6249	0.5845 0.6294	0.6147 0.7008	0.6845 0.7111	0.6076	Ave		0.6413			0.4000	7.1		20.0			
1-Methylnaphthalene	0.6285 0.6007	0.5498 0.6080	0.5882 0.6670	0.6611 0.6681	0.5798	Ave		0.6168				6.8		20.0			
Hexachlorocyclopentadiene	0.3924	0.3273 0.4183	0.3454 0.4507	0.3858 0.4632	0.3665	Ave		0.3937			0.0500	12.0		20.0			
1,2,3,5-Tetrachlorobenzene	0.6060	0.5580 0.6357	0.5687 0.6743	0.6237 0.7106	0.5610	Ave		0.6173				9.0		20.0			
2,4,6-Trichlorophenol	0.4576	0.3879 0.4941	0.4283 0.5341	0.4904 0.5127	0.4479	Ave		0.4691			0.2000	10.0		20.0			
2,4,5-Trichlorophenol	0.5033	0.3981 0.4993	0.4624 0.5361	0.5031 0.5611	0.4538	Ave		0.4896			0.2000	10.0		20.0			
2,4-Toluene diamine	0.1594	0.1978 0.1278	0.2400 +++++	0.2707 +++++	0.2225	Qua	0.0242	0.2458	-0.008						0.9940		0.9900
1,2,3,4 -Tetrachlorobenzene	0.5835	0.5411 0.6032	0.5491 0.6471	0.6014 0.6689	0.5492	Ave		0.5929				7.9		20.0			
1,1'-Biphenyl	1.3544 1.3449	1.2884 1.4003	1.3244 1.5052	1.4331 1.5363	1.2926	Ave		1.3866			0.0100	6.4		20.0			
2-Chloronaphthalene	1.1633 1.0703	1.0211 1.1104	1.0523 1.1738	1.1364 1.1888	1.0375	Ave		1.1060			0.8000	5.7		20.0			
2-Nitroaniline	0.3874	0.3155 0.3914	0.3446 0.4244	0.3851 0.4218	0.3727	Ave		0.3804			0.0100	9.6		20.0			
Dimethyl phthalate	1.1723	1.0593 1.1969	1.1039 1.2802	1.2273 1.2826	1.1154	Ave		1.1797			0.0100	7.0		20.0			
2,6-Dinitrotoluene	0.2869	0.2062 0.2955	0.2269 0.3185	0.2833 0.3212	0.2692	Ave		0.2760				15.0		20.0			
1,2-Dinitrobenzene	0.1497	0.1100 0.1518	0.1236 0.1636	0.1461 0.1657	0.1373	Ave		0.1435				13.0		20.0			
Acenaphthylene	1.6467 1.6467	1.4743 1.6908	1.5746 1.7963	1.7385 1.8144	1.5822	Ave		1.6627			0.9000	6.6		20.0			
3-Nitroaniline	0.3248	0.2493 0.3372	0.2801 0.3584	0.3144 0.3615	0.3058	Ave		0.3164			0.0100	12.0		20.0			
2,4-Dinitrophenol	0.2535	+++++ 0.2792	0.1651 0.3098	0.2021 0.3148	0.2275	Lin1	-0.402	0.3064			0.0100				0.9930		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Acenaphthene	1.1706 1.1215	0.9681 1.1479	1.0643 1.2249	1.1813 1.2732	1.0498	Ave		1.1335			0.9000	8.3		20.0			
4-Nitrophenol	0.2211	+++++ 0.2138	0.2007 0.2466	0.2234 0.2499	0.2233	Ave		0.2255				7.7		20.0			
2,4-Dinitrotoluene	0.3921	0.2692 0.4061	0.3338 0.4314	0.3804 0.4339	0.3621	Ave		0.3761			0.2000	15.0		20.0			
Dibenzofuran	1.5526 1.4818	1.3539 1.4998	1.4086 1.5936	1.5745 1.6354	1.4135	Ave		1.5015			0.8000	6.4		20.0			
2,3,5,6-Tetrachlorophenol	0.4320	0.3141 0.4450	0.3668 0.4887	0.4353 0.4954	0.4038	Ave		0.4226				14.0		20.0			
Diethyl phthalate	1.1461	0.9700 1.1737	1.0637 1.2445	1.2072 1.2702	1.1008	Ave		1.1470			0.0100	8.7		20.0			
4-Chlorophenyl phenyl ether	0.6619	0.6027 0.6722	0.6317 0.7261	0.6960 0.7479	0.6268	Ave		0.6707			0.4000	7.5		20.0			
4-Nitroaniline	0.3573	0.2826 0.3702	0.3116 0.4016	0.3583 0.4163	0.3380	Ave		0.3545			0.0100	12.0		20.0			
Fluorene	1.1992 1.2502	1.1217 1.2800	1.1544 1.3899	1.2860 1.4023	1.1944	Ave		1.2531			0.9000	7.8		20.0			
4,6-Dinitro-2-methylphenol	0.1974	+++++ 0.2073	0.1435 0.2288	0.1735 0.2333	0.1767	Ave		0.1943			0.0100	17.0		20.0			
N-Nitrosodiphenylamine	0.5852	0.5082 0.6005	0.5434 0.6422	0.5901 0.6477	0.5458	Ave		0.5829			0.0100	8.4		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.7177	0.6303 0.7311	0.6875 0.7926	0.7677 0.7952	0.6957	Ave		0.7283				7.8		20.0			
Azobenzene	0.7176	0.6277 0.7305	0.6960 0.7926	0.7717 0.7952	0.6954	Ave		0.7283				7.8		20.0			
4-Bromophenyl phenyl ether	0.2203	0.1910 0.2253	0.2061 0.2431	0.2268 0.2521	0.2060	Ave		0.2213			0.1000	9.1		20.0			
Hexachlorobenzene	0.2051 0.2074	0.1877 0.2118	0.2063 0.2273	0.2177 0.2302	0.1977	Ave		0.2101			0.1000	6.4		20.0			
Atrazine	0.1525	0.1297 0.1572	0.1428 0.1661	0.1600 0.1497	0.1478	Ave		0.1507			0.0100	7.4		20.0			
Pentachlorophenol	0.1790	0.1109 0.1917	0.1443 0.2136	0.1620 0.2200	0.1705	Lin1	-0.140	0.2086			0.0500				0.9930		0.9900
Phenanthrene	1.1004 1.0038	0.9252 1.0213	1.0067 1.1005	1.0920 1.1163	0.9696	Ave		1.0373			0.7000	6.5		20.0			
Anthracene	1.0213 1.0375	0.8868 1.0599	0.9939 1.1434	1.0858 1.1518	0.9842	Ave		1.0405			0.7000	8.0		20.0			
Carbazole	0.8991	0.7713 0.9185	0.8391 0.9918	0.9500 0.9975	0.8645	Ave		0.9040			0.0100	8.6		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Di-n-butyl phthalate	1.0879	0.8654 1.1102	0.9759 1.2055	1.1410 1.1568	1.0432	Ave		1.0732			0.0100	10.0		20.0			
Fluoranthene	1.0739 1.1360	0.9961 1.1695	1.0465 1.2479	1.2056 1.2764	1.0793	Ave		1.1368			0.6000	8.4		20.0			
Benzidine	0.5535	0.3747 0.5486	0.4463 0.5636	0.5482 0.5777	0.5304	Ave		0.5179				14.0		20.0			
Pyrene	1.0210 1.0260	0.9004 1.0199	0.9964 1.1065	1.0796 1.0839	0.9852	Ave		1.0243			0.6000	6.1		20.0			
Butyl benzyl phthalate	0.4159	0.3307 0.4205	0.3647 0.4545	0.4095 0.4496	0.3888	Ave		0.4043			0.0100	10.0		20.0			
3,3'-Dimethoxybenzidine	0.2969	0.1601 0.3112	0.2203 0.3347	0.2707 0.3323	0.2664	Lin1	-0.107	0.3270							0.9970		0.9900
Bis(2-ethylhexyl) phthalate	0.5960	0.4636 0.6005	0.5180 0.6564	0.6090 0.6563	0.5690	Ave		0.5836			0.0100	11.0		20.0			
4,4'-Methylene bis(2-chloroaniline)	0.2290	0.1641 0.2383	0.2064 0.2633	0.2284 0.2722	0.2176	Ave		0.2274				15.0		20.0			
3,3'-Dichlorobenzidine	0.4587	0.3566 0.4670	0.3937 0.5011	0.4705 0.5132	0.4275	Ave		0.4485			0.0100	12.0		20.0			
Benzo[a]anthracene	1.1697 1.0383	0.9236 1.0329	1.0136 1.1204	1.0873 1.1065	0.9755	Ave		1.0520			0.8000	7.3		20.0			
Chrysene	1.0287 0.9018	0.8662 0.9248	0.9057 1.0041	0.9651 0.9759	0.8770	Ave		0.9388			0.7000	6.1		20.0			
Di-n-octyl phthalate	1.1380	0.7643 1.1818	0.8805 1.3071	1.0965 1.3084	1.0846	Ave		1.0952			0.0100	17.0		20.0			
Benzo[b]fluoranthene	1.0085 1.1853	0.8928 1.2279	1.1239 1.3812	1.1448 1.2966	1.0599	Ave		1.1468			0.7000	13.0		20.0			
Benzo[k]fluoranthene	1.2553 1.1891	1.1647 1.1764	1.1079 1.2791	1.3476 1.3429	1.1606	Ave		1.2248			0.7000	6.9		20.0			
Benzo[a]pyrene	0.8820 1.0801	0.8820 1.1129	0.9382 1.2099	1.0983 1.2170	1.0254	Ave		1.0495			0.7000	12.0		20.0			
Indeno[1,2,3-cd]pyrene	0.9451 1.1382	0.8644 1.1691	0.9576 1.2828	1.1200 1.2609	1.0737	Ave		1.0902			0.5000	13.0		20.0			
Dibenz(a,h)anthracene	0.8055 0.9505	0.7011 0.9886	0.7881 1.0795	0.9403 1.0724	0.8903	Ave		0.9129			0.4000	14.0		20.0			
Benzo[g,h,i]perylene	0.8048 0.9073	0.6983 0.9428	0.7919 1.0369	0.9014 1.0358	0.8704	Ave		0.8877			0.5000	13.0		20.0			
2-Fluorophenol (Surr)	1.4638	1.2995 1.5098	1.4079 1.6159	1.5280 1.6181	1.4166	Ave		1.4824				7.3		20.0			
Phenol-d5 (Surr)	1.9597	1.8530 1.9960	1.8985 2.1551	2.0586 2.1553	1.8946	Ave		1.9963				5.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Nitrobenzene-d5 (Surr)	0.4312 0.4186	0.3718 0.4191	0.4006 0.4617	0.4449 0.4574	0.4036	Ave		0.4232				6.9		20.0			
2-Fluorobiphenyl (Surr)	1.3796 1.2776	1.2127 1.3187	1.2442 1.3884	1.3586 1.4160	1.2155	Ave		1.3124				5.9		20.0			
2,4,6-Tribromophenol (Surr)	 0.1973	0.1527 0.2031	0.1637 0.2228	0.1935 0.2278	0.1789	Ave		0.1925				14.0		20.0			
Terphenyl-d14 (Surr)	0.6725 0.6992	0.6300 0.7017	0.6682 0.7592	0.7260 0.7587	0.6588	Ave		0.6971				6.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80408/6	30403006.D
Level 2	STD2 240-80408/5	30403005.D
Level 3	STD3 240-80408/4	30403004.D
Level 4	STD4 240-80408/3	30403003.D
Level 5	STD5 240-80408/2	30403002.D
Level 6	STD6 240-80408/10	30403010.D
Level 7	STD7 240-80408/9	30403009.D
Level 8	STD8 240-80408/8	30403008.D
Level 9	STD9 240-80408/7	30403007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	366874	15801 522079	31624 729166	68239 942003	157450	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	573166	23646 785443	49084 1154346	105456 1484698	238538	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	905093	38680 1312205	79325 1862800	169926 2369401	398812	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Ethyl methacrylate	DCB	Ave	702938	28641 995964	57797 1425851	127882 1815640	303856	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3-Chloropropionitrile	DCB	Ave	524385	23458 738241	45307 1038831	98662 1379413	227014	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Ave	965101	40488 1365599	81259 1888325	183196 2280786	433026	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	7035 546065	29613 673269	61080 +++++	132721 +++++	290789	0.100 10.0	0.500 15.0	1.00 +++++	2.00 +++++	5.00
Phenol	DCB	Ave	1208914	50264 1717571	101938 2454422	228192 3190806	517884	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1317479	51884 1962092	105334 2760881	238346 3700213	580165	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	797104	34840 1071581	67603 1566913	160103 1986940	333838	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	949613	39714 1372849	79420 1956797	176138 2533941	411726	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	852401	36456 1208400	72478 1725258	157544 2241966	370054	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCB	Ave	1055609	45303 1517523	90871 2148888	197872 2816134	449920	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzyl alcohol	DCB	Ave	592560	24433 849888	49139 1193200	111567 1586958	259093	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dichlorobenzene	DCB	Ave	819085	35178 1175820	69196 1692162	154916 2221123	355701	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylphenol	DCB	Ave	878828	34449 1262435	72455 1784351	161532 2339059	371515	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
bis (2-chloroisopropyl) ether	DCB	Ave	1274969	56977 1824283	112698 2551341	248886 3318995	578016	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3 & 4 Methylphenol	DCB	Ave	881376	35694 1272883	74921 1803331	165284 2354691	391807	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodi-n-propylamine	DCB	Ave	645954	27139 930262	56428 1296568	123343 1726172	284868	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acetophenone	DCB	Ave	991383	39972 1415488	84597 1962929	187943 2642576	431571	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachloroethane	DCB	Ave	302854	12486 426394	24164 610545	55872 790980	128466	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene	NPT	Ave	878244	37134 1229837	72562 1740654	165500 2306187	379051	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Isophorone	NPT	Ave	1414898	54557 2019227	117113 2835445	265891 3774193	627130	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dimethylphenol	NPT	Ave	995308	40664 1431908	82400 2033384	186819 2702131	429067	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitrophenol	NPT	Ave	545119	20706 789855	44044 1126456	97243 1504790	236367	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3,5-Trichlorobenzene	NPT	Ave	762774	32507 1088353	63123 1573939	143828 2108917	330325	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Qua	962110	+++++ 1507743	53737 2290978	131188 3041935	409754	20.0	+++++ 30.0	2.00 40.0	4.00 50.0	10.0
Bis(2-chloroethoxy)methane	NPT	Ave	875483	36780 1256809	73561 1753142	163685 2322469	382399	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dichlorophenol	NPT	Ave	775175	30715 1117977	63045 1562735	143202 2099444	337104	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,4-Trichlorobenzene	NPT	Ave	739240	31650 1065945	62735 1499021	140007 1973892	317684	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Naphthalene	NPT	Ave	22409 2143778	93251 2997836	182903 4280635	404749 5607317	939292	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chloroaniline	NPT	Ave	976614	42901 1407474	88355 1960589	200514 2563378	408877	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobutadiene	NPT	Ave	443030	17975 634674	37265 903911	82824 1211483	190586	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,3-Trichlorobenzene	NPT	Ave	687146	29823 982203	58565 1382869	129033 1837319	301608	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Caprolactam	NPT	Ave	229449	7906 316253	18510 460460	41149 598825	97847	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chloro-3-methylphenol	NPT	Ave	811040	31704 1166816	68170 1651149	151143 2192805	352471	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylnaphthalene	NPT	Ave	12932 1386219	58408 1976083	116634 2811407	263023 3750323	602169	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1-Methylnaphthalene	NPT	Ave	13231 1332449	54942 1908881	111602 2675722	254007 3523958	574552	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorocyclopentadiene	ANT	Ave	512288	19164 764211	39722 1093260	91155 1479640	219886	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,3,5-Tetrachlorobenzene	ANT	Ave	791061	32665 1161468	65406 1635494	147390 2269859	336580	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Trichlorophenol	ANT	Ave	597357	22707 902796	49259 1295390	115880 1637552	268679	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,5-Trichlorophenol	ANT	Ave	656972	23308 912182	53177 1300242	118877 1792181	272274	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Toluene diamine	NPT	Qua	353572	19762 401356	45541 +++++	104022 +++++	220448	10.0	0.500 15.0	1.00 +++++	2.00 +++++	5.00
1,2,3,4 -Tetrachlorobenzene	ANT	Ave	761708	31678 1102000	63154 1569551	142116 2136446	329497	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,1'-Biphenyl	ANT	Ave	16819 1755570	75431 2558443	152316 3650876	338644 4906995	775470	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chloronaphthalene	ANT	Ave	14447 1397194	59780 2028789	121022 2847164	268531 3797104	622400	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitroaniline	ANT	Ave	505750	18472 715074	39632 1029445	90997 1347136	223565	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dimethyl phthalate	ANT	Ave	1530299	62017 2186739	126949 3105134	290002 4096643	669144	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,6-Dinitrotoluene	ANT	Ave	374493	12074 539894	26095 772549	66944 1025883	161489	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2-Dinitrobenzene	ANT	Ave	195454	6440 277388	14209 396882	34526 529170	82376	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acenaphthylene	ANT	Ave	20450 2149531	86314 3089053	181091 4356987	410819 5795468	949207	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3-Nitroaniline	ANT	Ave	424001	14596 616041	32216 869426	74285 1154710	183446	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dinitrophenol	ANT	Linl	661710	+++++ 1020042	37970 1503034	95515 2010782	273016	20.0	+++++ 30.0	2.00 40.0	4.00 50.0	10.0
Acenaphthene	ANT	Ave	14537 1463931	56676 2097298	122396 2971074	279151 4066889	629819	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Nitrophenol	ANT	Ave	288629	+++++ 390623	23081 598137	52783 798158	133948	10.0	+++++ 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dinitrotoluene	ANT	Ave	511782	15763 741974	38394 1046289	89880 1385892	217237	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dibenzofuran	ANT	Ave	19281 1934336	79264 2740129	161993 3865374	372047 5223830	847977	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,3,5,6-Tetrachlorophenol	ANT	Ave	563963	18390 813015	42186 1185356	102854 1582282	242269	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Diethyl phthalate	ANT	Ave	1496093	56785 2144432	122331 3018621	285261 4057031	660390	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chlorophenyl phenyl ether	ANT	Ave	864045	35285 1228188	72652 1761240	164465 2389039	376007	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Nitroaniline	ANT	Ave	466440	16547 676365	35835 974155	84676 1329641	202784	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluorene	ANT	Ave	14892 1631935	65672 2338553	132759 3371214	303887 4479184	716562	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4,6-Dinitro-2-methylphenol	PHN	Ave	452656	+++++ 664890	28130 968528	70276 1303980	185623	10.0	+++++ 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodiphenylamine	PHN	Ave	1342070	51751 1925534	106510 2718833	239077 3620394	573373	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	1645820	64192 2344474	134747 3355655	311036 4445143	730832	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Azobenzene	PHN	Ave	1645553	63921 2342521	136404 3355655	312647 4445143	730550	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Bromophenyl phenyl ether	PHN	Ave	505131	19450 722426	40401 1029260	91892 1409388	216405	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobenzene	PHN	Ave	4492 475585	19120 679240	40434 962508	88179 1286752	207643	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Atrazine	PHN	Ave	349625	13211 504092	27987 703091	64818 836567	155298	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pentachlorophenol	PHN	Lin1	820849	22583 1229504	56564 1808902	131295 2459454	358280	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Phenanthrene	PHN	Ave	24104 2302004	94224 3275038	197303 4659255	442395 6239789	1018601	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Anthracene	PHN	Ave	22371 2379307	90311 3398664	194790 4840812	439916 6438183	1033937	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Carbazole	PHN	Ave	2061829	78548 2945195	164452 4199243	384901 5575703	908155	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-butyl phthalate	PHN	Ave	2494856	88134 3559907	191275 5103898	462257 6466417	1095961	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluoranthene	PHN	Ave	23524 2605199	101444 3750328	205104 5283158	488434 7135030	1133864	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzidine	CRY	Ave	1462778	42662 2061382	97654 2823656	254787 3882880	647448	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyrene	CRY	Ave	24696 2711539	102522 3832308	218016 5543607	501774 7285316	1202684	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butyl benzyl phthalate	CRY	Ave		37658	79789	190353	474583		0.500	1.00	2.00	5.00
			1099169	1579941	2277298	3021996		10.0	15.0	20.0	25.0	
3,3'-Dimethoxybenzidine	CRY	Lin1		18229	48211	125813	325154		0.500	1.00	2.00	5.00
			784605	1169559	1677023	2233426		10.0	15.0	20.0	25.0	
Bis(2-ethylhexyl) phthalate	CRY	Ave		52793	113344	283078	694535		0.500	1.00	2.00	5.00
			1575195	2256637	3288806	4411448		10.0	15.0	20.0	25.0	
4,4'-Methylene bis(2-chloroaniline)	CRY	Ave		18690	45158	106162	265602		0.500	1.00	2.00	5.00
			605217	895527	1319241	1829722		10.0	15.0	20.0	25.0	
3,3'-Dichlorobenzidine	CRY	Ave		40605	86139	218702	521845		0.500	1.00	2.00	5.00
			1212149	1754959	2510809	3449564		10.0	15.0	20.0	25.0	
Benzo[a]anthracene	CRY	Ave	28292	105168	221770	505388	1190784	0.100	0.500	1.00	2.00	5.00
			2744049	3881170	5613439	7437143		10.0	15.0	20.0	25.0	
Chrysene	CRY	Ave	24883	98629	198163	448590	1070583	0.100	0.500	1.00	2.00	5.00
			2383424	3474984	5030443	6559388		10.0	15.0	20.0	25.0	
Di-n-octyl phthalate	PRY	Ave		73166	164506	428807	1112129		0.500	1.00	2.00	5.00
			2547975	3698274	5387697	7242755		10.0	15.0	20.0	25.0	
Benzo[b]fluoranthene	PRY	Ave	20989	85470	209982	447695	1086801	0.100	0.500	1.00	2.00	5.00
			2653722	3842446	5693081	7177241		10.0	15.0	20.0	25.0	
Benzo[k]fluoranthene	PRY	Ave	26125	111497	206979	526976	1190074	0.100	0.500	1.00	2.00	5.00
			2662246	3681156	5272298	7433713		10.0	15.0	20.0	25.0	
Benzo[a]pyrene	PRY	Ave	18355	84436	175271	429509	1051466	0.100	0.500	1.00	2.00	5.00
			2418178	3482547	4986763	6736556		10.0	15.0	20.0	25.0	
Indeno[1,2,3-cd]pyrene	PRY	Ave	19668	82749	178902	437976	1101004	0.100	0.500	1.00	2.00	5.00
			2548423	3658281	5287561	6979503		10.0	15.0	20.0	25.0	
Dibenz(a,h)anthracene	PRY	Ave	16764	67117	147241	367694	912962	0.100	0.500	1.00	2.00	5.00
			2128012	3093510	4449357	5936333		10.0	15.0	20.0	25.0	
Benzo[g,h,i]perylene	PRY	Ave	16750	66853	147943	352484	892530	0.100	0.500	1.00	2.00	5.00
			2031319	2950173	4274030	5733411		10.0	15.0	20.0	25.0	
2-Fluorophenol (Surr)	DCB	Ave		32324	68956	152080	356073		0.500	1.00	2.00	5.00
			835714	1203743	1711263	2219281		10.0	15.0	20.0	25.0	
Phenol-d5 (Surr)	DCB	Ave		46090	92987	204889	476244		0.500	1.00	2.00	5.00
			1118874	1591404	2282288	2956081		10.0	15.0	20.0	25.0	
Nitrobenzene-d5 (Surr)	NPT	Ave	9078	37159	76010	170944	399984	0.100	0.500	1.00	2.00	5.00
			928638	1315858	1852394	2412561		10.0	15.0	20.0	25.0	
2-Fluorobiphenyl (Surr)	ANT	Ave	17133	70996	143089	321036	729200	0.100	0.500	1.00	2.00	5.00
			1667708	2409238	3367599	4522928		10.0	15.0	20.0	25.0	
2,4,6-Tribromophenol (Surr)	ANT	Ave		8939	18828	45728	107316		0.500	1.00	2.00	5.00
			257509	371005	540405	727641		10.0	15.0	20.0	25.0	
Terphenyl-d14 (Surr)	CRY	Ave	16267	71731	146202	337427	804221	0.100	0.500	1.00	2.00	5.00
			1847863	2636815	3803533	5099268		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 80408

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/03/2013 14:18 Calibration End Date: 04/03/2013 16:51 Calibration ID: 14359

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80408/11 Calibration Date: 04/03/2013 17:10

Instrument ID: A4HP10 Calib Start Date: 04/03/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/03/2013 16:51

Lab File ID: 30403011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6582	0.6257		9.51	10.0	-4.9	30.0
N-Nitrosodimethylamine	Ave	1.015	0.9558		9.41	10.0	-5.9	30.0
Pyridine	Ave	1.648	1.562		9.48	10.0	-5.2	30.0
Ethyl methacrylate	Ave	1.247	1.184		9.50	10.0	-5.0	30.0
3-Chloropropionitrile	Ave	0.9492	0.8950		9.43	10.0	-5.7	30.0
Malononitrile	Ave	1.712	1.685		9.84	10.0	-1.6	30.0
Benzaldehyde	Ave	1.148	0.9809	0.0100	8.55	10.0	-14.5	30.0
Phenol	Ave	2.171	2.075	0.8000	9.55	10.0	-4.5	30.0
Aniline	Ave	2.377	2.273		9.56	10.0	-4.4	30.0
Bis(2-chloroethyl)ether	Ave	1.423	1.378	0.7000	9.69	10.0	-3.1	30.0
2-Chlorophenol	Ave	1.713	1.641	0.8000	9.58	10.0	-4.2	30.0
1,3-Dichlorobenzene	Ave	1.534	1.460		9.52	10.0	-4.8	30.0
1,4-Dichlorobenzene	Ave	1.911	1.817		9.51	10.0	-4.9	30.0
Benzyl alcohol	Ave	1.066	1.026		9.63	10.0	-3.7	30.0
1,2-Dichlorobenzene	Ave	1.491	1.418		9.51	10.0	-4.9	30.0
2-Methylphenol	Ave	1.560	1.498	0.7000	9.60	10.0	-4.0	30.0
bis (2-chloroisopropyl) ether	Ave	2.343	2.227		9.51	10.0	-4.9	30.0
3 & 4 Methylphenol	Ave	1.593	1.536		9.64	10.0	-3.6	30.0
N-Nitrosodi-n-propylamine	Ave	1.175	1.146	0.5000	9.75	10.0	-2.5	30.0
Acetophenone	Ave	1.779	1.720	0.0100	9.67	10.0	-3.3	30.0
Hexachloroethane	Ave	0.5358	0.5179	0.3000	9.67	10.0	-3.3	30.0
Nitrobenzene	Ave	0.4033	0.3946	0.2000	9.78	10.0	-2.2	30.0
Isophorone	Ave	0.6489	0.6619	0.4000	10.2	10.0	2.0	30.0
2,4-Dimethylphenol	Ave	0.4605	0.4532	0.2000	9.84	10.0	-1.6	30.0
2-Nitrophenol	Ave	0.2493	0.2493	0.1000	10.0	10.0	0.0	30.0
1,3,5-Trichlorobenzene	Ave	0.3560	0.3422		9.61	10.0	-3.9	30.0
Bis(2-chloroethoxy)methane	Ave	0.4050	0.4050	0.3000	10.0	10.0	0.0	30.0
Benzoic acid	Qua		0.2431		21.3	20.0	6.3	30.0
2,4-Dichlorophenol	Ave	0.3557	0.3529	0.2000	9.92	10.0	-0.8	30.0
1,2,4-Trichlorobenzene	Ave	0.3441	0.3381		9.83	10.0	-1.7	30.0
Naphthalene	Ave	1.002	0.9812	0.7000	9.80	10.0	-2.0	30.0
4-Chloroaniline	Ave	0.4616	0.4405	0.0100	9.54	10.0	-4.6	30.0
Hexachlorobutadiene	Ave	0.2051	0.2018	0.0100	9.84	10.0	-1.6	30.0
1,2,3-Trichlorobenzene	Ave	0.3204	0.3125		9.76	10.0	-2.4	30.0
Caprolactam	Ave	0.1019	0.1080	0.0100	10.6	10.0	6.0	30.0
4-Chloro-3-methylphenol	Ave	0.3738	0.3810	0.2000	10.2	10.0	1.9	30.0
2-Methylnaphthalene	Ave	0.6413	0.6357	0.4000	9.91	10.0	-0.9	30.0
1-Methylnaphthalene	Ave	0.6168	0.6121		9.92	10.0	-0.8	30.0
1,2,3,5-Tetrachlorobenzene	Ave	0.6173	0.5789		9.38	10.0	-6.2	30.0
Hexachlorocyclopentadiene	Ave	0.3937	0.3832	0.0500	9.73	10.0	-2.7	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80408/11 Calibration Date: 04/03/2013 17:10

Instrument ID: A4HP10 Calib Start Date: 04/03/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/03/2013 16:51

Lab File ID: 30403011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4,6-Trichlorophenol	Ave	0.4691	0.4564	0.2000	9.73	10.0	-2.7	30.0
2,4,5-Trichlorophenol	Ave	0.4896	0.4937	0.2000	10.1	10.0	0.8	30.0
2,4-Toluene diamine	Qua		0.2119			10.0		30.0
1,1'-Biphenyl	Ave	1.387	1.316	0.0100	9.49	10.0	-5.1	30.0
1,2,3,4 -Tetrachlorobenzene	Ave	0.5929	0.5647		9.52	10.0	-4.8	30.0
2-Chloronaphthalene	Ave	1.106	1.055	0.8000	9.53	10.0	-4.7	30.0
2-Nitroaniline	Ave	0.3804	0.3816	0.0100	10.0	10.0	0.3	30.0
Dimethyl phthalate	Ave	1.180	1.160	0.0100	9.83	10.0	-1.7	30.0
2,6-Dinitrotoluene	Ave	0.2760	0.2864		10.4	10.0	3.8	30.0
1,2-Dinitrobenzene	Ave	0.1435	0.1466		10.2	10.0	2.2	30.0
Acenaphthylene	Ave	1.663	1.621	0.9000	9.75	10.0	-2.5	30.0
3-Nitroaniline	Ave	0.3164	0.3233	0.0100	10.2	10.0	2.2	30.0
2,4-Dinitrophenol	Lin1		0.2533	0.0100	17.8	20.0	-10.8	30.0
Acenaphthene	Ave	1.134	1.087	0.9000	9.59	10.0	-4.1	30.0
4-Nitrophenol	Ave	0.2255	0.2159		9.57	10.0	-4.3	30.0
2,4-Dinitrotoluene	Ave	0.3761	0.3901	0.2000	10.4	10.0	3.7	30.0
Dibenzofuran	Ave	1.502	1.434	0.8000	9.55	10.0	-4.5	30.0
2,3,5,6-Tetrachlorophenol	Ave	0.4226	0.4306		10.2	10.0	1.9	30.0
Diethyl phthalate	Ave	1.147	1.133	0.0100	9.87	10.0	-1.3	30.0
4-Chlorophenyl phenyl ether	Ave	0.6707	0.6480	0.4000	9.66	10.0	-3.4	30.0
4-Nitroaniline	Ave	0.3545	0.3564	0.0100	10.1	10.0	0.5	30.0
Fluorene	Ave	1.253	1.227	0.9000	9.79	10.0	-2.1	30.0
4,6-Dinitro-2-methylphenol	Ave	0.1943	0.1971	0.0100	10.1	10.0	1.4	30.0
N-Nitrosodiphenylamine	Ave	0.5829	0.5741	0.0100	9.85	10.0	-1.5	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.7283	0.7113		9.77	10.0	-2.3	30.0
Azobenzene	Ave	0.7283	0.7116		9.77	10.0	-2.3	30.0
4-Bromophenyl phenyl ether	Ave	0.2213	0.2196	0.1000	9.92	10.0	-0.8	30.0
Hexachlorobenzene	Ave	0.2101	0.2057	0.1000	9.79	10.0	-2.1	30.0
Atrazine	Ave	0.1507	0.1559	0.0100	10.3	10.0	3.5	30.0
Pentachlorophenol	Lin1		0.1778	0.0500	17.7	20.0	-11.4	30.0
Phenanthrene	Ave	1.037	0.9903	0.7000	9.55	10.0	-4.5	30.0
Anthracene	Ave	1.041	1.024	0.7000	9.84	10.0	-1.6	30.0
Carbazole	Ave	0.9040	0.8960	0.0100	9.91	10.0	-0.9	30.0
Di-n-butyl phthalate	Ave	1.073	1.091	0.0100	10.2	10.0	1.6	30.0
Fluoranthene	Ave	1.137	1.117	0.6000	9.83	10.0	-1.7	30.0
Benzidine	Ave	0.5179	0.5306		10.2	10.0	2.5	30.0
Pyrene	Ave	1.024	1.016	0.6000	9.92	10.0	-0.8	30.0
Butyl benzyl phthalate	Ave	0.4043	0.4143	0.0100	10.2	10.0	2.5	30.0
3,3'-Dimethoxybenzidine	Lin1		0.2987		9.46	10.0	-5.4	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.5836	0.5954	0.0100	10.2	10.0	2.0	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-80408/11 Calibration Date: 04/03/2013 17:10

Instrument ID: A4HP10 Calib Start Date: 04/03/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/03/2013 16:51

Lab File ID: 30403011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4,4'-Methylene bis(2-chloroaniline)	Ave	0.2274	0.2262		9.95	10.0	-0.5	30.0
3,3'-Dichlorobenzidine	Ave	0.4485	0.4488	0.0100	10.0	10.0	0.0	30.0
Benzo[a]anthracene	Ave	1.052	1.027	0.8000	9.76	10.0	-2.4	30.0
Chrysene	Ave	0.9388	0.9031	0.7000	9.62	10.0	-3.8	30.0
Di-n-octyl phthalate	Ave	1.095	1.152	0.0100	10.5	10.0	5.2	30.0
Benzo[b]fluoranthene	Ave	1.147	1.230	0.7000	10.7	10.0	7.2	30.0
Benzo[k]fluoranthene	Ave	1.225	1.155	0.7000	9.43	10.0	-5.7	30.0
Benzo[a]pyrene	Ave	1.050	1.092	0.7000	10.4	10.0	4.1	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.090	1.156	0.5000	10.6	10.0	6.0	30.0
Dibenz(a,h)anthracene	Ave	0.9129	0.9608	0.4000	10.5	10.0	5.2	30.0
Benzo[g,h,i]perylene	Ave	0.8877	0.9186	0.5000	10.3	10.0	3.5	30.0
2-Fluorophenol (Surr)	Ave	1.482	1.451		9.79	10.0	-2.1	30.0
Phenol-d5 (Surr)	Ave	1.996	1.925		9.64	10.0	-3.6	30.0
Nitrobenzene-d5 (Surr)	Ave	0.4232	0.4185		9.89	10.0	-1.1	30.0
2-Fluorobiphenyl (Surr)	Ave	1.312	1.243		9.47	10.0	-5.3	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1925	0.1919		9.97	10.0	-0.3	30.0
Terphenyl-d14 (Surr)	Ave	0.6971	0.6878		9.87	10.0	-1.3	30.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/10/2013 09:43

Analysis Batch Number: 81316 End Date: 04/10/2013 18:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-81316/1		04/10/2013 09:43	1	30410001.D	DB-624 0.18(mm)
CCV 240-81316/2 CCVIS		04/10/2013 10:01	1	30410002.D	DB-624 0.18(mm)
MB 240-80724/9-A		04/10/2013 11:16	1	30410006.D	DB-624 0.18(mm)
LCS 240-80724/10-A		04/10/2013 11:35	1	30410007.D	DB-624 0.18(mm)
240-22680-3	MRC-MW14A-040113	04/10/2013 17:24	1	30410026.D	DB-624 0.18(mm)
240-22680-8	MRC-MW-69B-040113	04/10/2013 18:38	1	30410030.D	DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: 30410001.D DFTPP Injection Date: 04/10/2013

Instrument ID: A4HP10 DFTPP Injection Time: 09:43

Analysis Batch No.: 81316

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	39.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.1	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	46.0	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	26.2	
365	Greater than 0.75% of mass 198	2.3	
441	Present, but less than mass 443	0.1	
442	40.0 - 110.0% of mass 198	46.5	
443	15.0 - 24.0% of mass 442	8.8	(19.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-81316/2	30410002.D	04/10/2013	10:01
	MB 240-80724/9-A	30410006.D	04/10/2013	11:16
	LCS 240-80724/10-A	30410007.D	04/10/2013	11:35
MRC-MW14A-040113	240-22680-3	30410026.D	04/10/2013	17:24
MRC-MW-69B-040113	240-22680-8	30410030.D	04/10/2013	18:38

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCV 240-81316/2 Calibration Date: 04/10/2013 10:01

Instrument ID: A4HP10 Calib Start Date: 04/03/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/03/2013 16:51

Lab File ID: 30410002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6582	0.5568		8.46	10.0	-15.4	20.0
N-Nitrosodimethylamine	Ave	1.015	0.9020		8.88	10.0	-11.2	20.0
Pyridine	Ave	1.648	1.438		8.72	10.0	-12.8	20.0
Ethyl methacrylate	Ave	1.247	1.058		8.49	10.0	-15.1	20.0
3-Chloropropionitrile	Ave	0.9492	0.8172		8.61	10.0	-13.9	20.0
Malononitrile	Ave	1.712	1.568		9.16	10.0	-8.4	20.0
Benzaldehyde	Ave	1.148	0.8814	0.0100	7.68	10.0	-23.2*	20.0
Phenol	Ave	2.171	2.101	0.8000	9.68	10.0	-3.2	20.0
Aniline	Ave	2.377	2.199		9.25	10.0	-7.5	20.0
Bis(2-chloroethyl)ether	Ave	1.423	1.425	0.7000	10.0	10.0	0.2	20.0
2-Chlorophenol	Ave	1.713	1.678	0.8000	9.80	10.0	-2.0	20.0
1,3-Dichlorobenzene	Ave	1.534	1.511		9.85	10.0	-1.5	20.0
1,4-Dichlorobenzene	Ave	1.911	1.929		10.1	10.0	0.9	20.0
Benzyl alcohol	Ave	1.066	1.085		10.2	10.0	1.8	20.0
1,2-Dichlorobenzene	Ave	1.491	1.496		10.0	10.0	0.4	20.0
2-Methylphenol	Ave	1.560	1.533	0.7000	9.83	10.0	-1.7	20.0
bis (2-chloroisopropyl) ether	Ave	2.343	2.009		8.58	10.0	-14.2	20.0
3 & 4 Methylphenol	Ave	1.593	1.624		10.2	10.0	2.0	20.0
N-Nitrosodi-n-propylamine	Ave	1.175	1.141	0.5000	9.72	10.0	-2.8	20.0
Acetophenone	Ave	1.779	1.812	0.0100	10.2	10.0	1.9	20.0
Hexachloroethane	Ave	0.5358	0.5361	0.3000	10.0	10.0	0.0	20.0
Nitrobenzene	Ave	0.4033	0.3870	0.2000	9.60	10.0	-4.0	20.0
Isophorone	Ave	0.6489	0.6369	0.4000	9.81	10.0	-1.9	20.0
2-Nitrophenol	Ave	0.2493	0.2566	0.1000	10.3	10.0	2.9	20.0
2,4-Dimethylphenol	Ave	0.4605	0.4746	0.2000	10.3	10.0	3.1	20.0
1,3,5-Trichlorobenzene	Ave	0.3560	0.3732		10.5	10.0	4.8	20.0
Bis(2-chloroethoxy)methane	Ave	0.4050	0.3860	0.3000	9.53	10.0	-4.7	20.0
Benzoic acid	Qua		0.2470		21.5	20.0	7.7	20.0
2,4-Dichlorophenol	Ave	0.3557	0.3739	0.2000	10.5	10.0	5.1	20.0
1,2,4-Trichlorobenzene	Ave	0.3441	0.3575		10.4	10.0	3.9	20.0
Naphthalene	Ave	1.002	0.9713	0.7000	9.70	10.0	-3.0	20.0
4-Chloroaniline	Ave	0.4616	0.4466	0.0100	9.67	10.0	-3.3	20.0
Hexachlorobutadiene	Ave	0.2051	0.2244	0.0100	10.9	10.0	9.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3204	0.3286		10.3	10.0	2.6	20.0
Caprolactam	Ave	0.1019	0.1053	0.0100	10.3	10.0	3.3	20.0
4-Chloro-3-methylphenol	Ave	0.3738	0.3863	0.2000	10.3	10.0	3.3	20.0
2-Methylnaphthalene	Ave	0.6413	0.6483	0.4000	10.1	10.0	1.1	20.0
1-Methylnaphthalene	Ave	0.6168	0.6371		10.3	10.0	3.3	20.0
1,2,3,5-Tetrachlorobenzene	Ave	0.6173	0.6491		10.5	10.0	5.2	20.0
Hexachlorocyclopentadiene	Ave	0.3937	0.4084	0.0500	10.4	10.0	3.7	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCV 240-81316/2 Calibration Date: 04/10/2013 10:01

Instrument ID: A4HP10 Calib Start Date: 04/03/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/03/2013 16:51

Lab File ID: 30410002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4,6-Trichlorophenol	Ave	0.4691	0.4817	0.2000	10.3	10.0	2.7	20.0
2,4,5-Trichlorophenol	Ave	0.4896	0.5182	0.2000	10.6	10.0	5.8	20.0
2,4-Toluene diamine	Qua		0.0884		4.03	10.0	-59.7*	20.0
1,1'-Biphenyl	Ave	1.387	1.388	0.0100	10.0	10.0	0.0	20.0
1,2,3,4 -Tetrachlorobenzene	Ave	0.5929	0.6200		10.5	10.0	4.6	20.0
2-Chloronaphthalene	Ave	1.106	1.111	0.8000	10.0	10.0	0.4	20.0
2-Nitroaniline	Ave	0.3804	0.3711	0.0100	9.76	10.0	-2.4	20.0
Dimethyl phthalate	Ave	1.180	1.214	0.0100	10.3	10.0	2.9	20.0
2,6-Dinitrotoluene	Ave	0.2760	0.2981		10.8	10.0	8.0	20.0
1,2-Dinitrobenzene	Ave	0.1435	0.1533		10.7	10.0	6.9	20.0
Acenaphthylene	Ave	1.663	1.707	0.9000	10.3	10.0	2.6	20.0
3-Nitroaniline	Ave	0.3164	0.3238	0.0100	10.2	10.0	2.3	20.0
Acenaphthene	Ave	1.134	1.134	0.9000	10.0	10.0	0.0	20.0
2,4-Dinitrophenol	Lin1		0.2623	0.0100	18.4	20.0	-7.8	20.0
4-Nitrophenol	Ave	0.2255	0.2220		9.84	10.0	-1.6	20.0
2,4-Dinitrotoluene	Ave	0.3761	0.4150	0.2000	11.0	10.0	10.3	20.0
Dibenzofuran	Ave	1.502	1.527	0.8000	10.2	10.0	1.7	20.0
2,3,5,6-Tetrachlorophenol	Ave	0.4226	0.4343		10.3	10.0	2.7	20.0
Diethyl phthalate	Ave	1.147	1.193	0.0100	10.4	10.0	4.0	20.0
4-Chlorophenyl phenyl ether	Ave	0.6707	0.7152	0.4000	10.7	10.0	6.6	20.0
4-Nitroaniline	Ave	0.3545	0.3667	0.0100	10.3	10.0	3.5	20.0
Fluorene	Ave	1.253	1.305	0.9000	10.4	10.0	4.1	20.0
4,6-Dinitro-2-methylphenol	Ave	0.1943	0.1861	0.0100	9.58	10.0	-4.2	20.0
N-Nitrosodiphenylamine	Ave	0.5829	0.5805	0.0100	9.96	10.0	-0.4	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.7283	0.6641		9.12	10.0	-8.8	20.0
Azobenzene	Ave	0.7283	0.6641		9.12	10.0	-8.8	20.0
4-Bromophenyl phenyl ether	Ave	0.2213	0.2282	0.1000	10.3	10.0	3.1	20.0
Hexachlorobenzene	Ave	0.2101	0.2147	0.1000	10.2	10.0	2.2	20.0
Atrazine	Ave	0.1507	0.1497	0.0100	9.93	10.0	-0.7	20.0
Pentachlorophenol	Lin1		0.1737	0.0500	17.3	20.0	-13.4	20.0
Phenanthrene	Ave	1.037	1.019	0.7000	9.82	10.0	-1.8	20.0
Anthracene	Ave	1.041	1.036	0.7000	9.95	10.0	-0.5	20.0
Carbazole	Ave	0.9040	0.9023	0.0100	9.98	10.0	-0.2	20.0
Di-n-butyl phthalate	Ave	1.073	1.130	0.0100	10.5	10.0	5.3	20.0
Fluoranthene	Ave	1.137	1.203	0.6000	10.6	10.0	5.8	20.0
Benzidine	Ave	0.5179	0.5676		11.0	10.0	9.6	20.0
Pyrene	Ave	1.024	1.039	0.6000	10.1	10.0	1.4	20.0
Butyl benzyl phthalate	Ave	0.4043	0.4317	0.0100	10.7	10.0	6.8	20.0
3,3'-Dimethoxybenzidine	Lin1		0.3120		9.87	10.0	-1.3	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.5836	0.6166	0.0100	10.6	10.0	5.7	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCV 240-81316/2 Calibration Date: 04/10/2013 10:01

Instrument ID: A4HP10 Calib Start Date: 04/03/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/03/2013 16:51

Lab File ID: 30410002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
3,3'-Dichlorobenzidine	Ave	0.4485	0.4674	0.0100	10.4	10.0	4.2	20.0
4,4'-Methylene bis(2-chloroaniline)	Ave	0.2274	0.2516		11.1	10.0	10.6	20.0
Benzo[a]anthracene	Ave	1.052	1.044	0.8000	9.92	10.0	-0.8	20.0
Chrysene	Ave	0.9388	0.9113	0.7000	9.71	10.0	-2.9	20.0
Di-n-octyl phthalate	Ave	1.095	1.222	0.0100	11.2	10.0	11.6	20.0
Benzo[b]fluoranthene	Ave	1.147	1.149	0.7000	10.0	10.0	0.2	20.0
Benzo[k]fluoranthene	Ave	1.225	1.298	0.7000	10.6	10.0	5.9	20.0
Benzo[a]pyrene	Ave	1.050	1.106	0.7000	10.5	10.0	5.4	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.090	1.186	0.5000	10.9	10.0	8.8	20.0
Dibenz(a,h)anthracene	Ave	0.9129	0.9908	0.4000	10.9	10.0	8.5	20.0
Benzo[g,h,i]perylene	Ave	0.8877	0.9373	0.5000	10.6	10.0	5.6	20.0
2-Fluorophenol (Surr)	Ave	1.482	1.432		9.66	10.0	-3.4	20.0
Phenol-d5 (Surr)	Ave	1.996	1.982		9.93	10.0	-0.7	20.0
Nitrobenzene-d5 (Surr)	Ave	0.4232	0.3774		8.92	10.0	-10.8	20.0
2-Fluorobiphenyl (Surr)	Ave	1.312	1.310		9.98	10.0	-0.2	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1925	0.2090		10.9	10.0	8.6	20.0
Terphenyl-d14 (Surr)	Ave	0.6971	0.7203		10.3	10.0	3.3	20.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/11/2013 17:39

Analysis Batch Number: 81611 End Date: 04/12/2013 00:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-81611/1		04/11/2013 17:39	1	30411001.D	DB-624 0.18(mm)
STD5 240-81611/2 IC		04/11/2013 18:04	1	30411002.D	DB-624 0.18(mm)
STD4 240-81611/3 IC		04/11/2013 18:28	1	30411003.D	DB-624 0.18(mm)
STD3 240-81611/4 IC		04/11/2013 18:53	1	30411004.D	DB-624 0.18(mm)
STD2 240-81611/5 IC		04/11/2013 19:17	1	30411005.D	DB-624 0.18(mm)
STD1 240-81611/6 IC		04/11/2013 19:41	1	30411006.D	DB-624 0.18(mm)
STD9 240-81611/7 IC		04/11/2013 20:06	1	30411007.D	DB-624 0.18(mm)
STD8 240-81611/8 IC		04/11/2013 20:30	1	30411008.D	DB-624 0.18(mm)
STD7 240-81611/9 IC		04/11/2013 20:54	1	30411009.D	DB-624 0.18(mm)
STD6 240-81611/10 ICIS		04/11/2013 21:19	1	30411010.D	DB-624 0.18(mm)
ICV 240-81611/11		04/11/2013 21:43	1	30411011.D	DB-624 0.18(mm)
STD5 240-81611/12 IC		04/11/2013 22:08	1		DB-624 0.18(mm)
STD4 240-81611/13 IC		04/11/2013 22:32	1		DB-624 0.18(mm)
STD3 240-81611/14 IC		04/11/2013 22:56	1		DB-624 0.18(mm)
STD2 240-81611/15 IC		04/11/2013 23:21	1		DB-624 0.18(mm)
STD6 240-81611/16 IC		04/11/2013 23:45	1		DB-624 0.18(mm)
STD7 240-81611/17 IC		04/12/2013 00:09	1		DB-624 0.18(mm)
STD8 240-81611/18 IC		04/12/2013 00:34	1		DB-624 0.18(mm)
STD9 240-81611/19 IC		04/12/2013 00:58	1		DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: 30411001.D DFTPP Injection Date: 04/11/2013

Instrument ID: A4HP10 DFTPP Injection Time: 17:39

Analysis Batch No.: 81611

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	44.0	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	48.3	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.2	
441	Present, but less than mass 443	10.1	
442	40.0 - 110.0% of mass 198	49.1	
443	15.0 - 24.0% of mass 442	10.2	(20.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-81611/2	30411002.D	04/11/2013	18:04
	STD4 240-81611/3	30411003.D	04/11/2013	18:28
	STD3 240-81611/4	30411004.D	04/11/2013	18:53
	STD2 240-81611/5	30411005.D	04/11/2013	19:17
	STD1 240-81611/6	30411006.D	04/11/2013	19:41
	STD9 240-81611/7	30411007.D	04/11/2013	20:06
	STD8 240-81611/8	30411008.D	04/11/2013	20:30
	STD7 240-81611/9	30411009.D	04/11/2013	20:54
	STD6 240-81611/10	30411010.D	04/11/2013	21:19
	ICV 240-81611/11	30411011.D	04/11/2013	21:43

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81611/6	30411006.D
Level 2	STD2 240-81611/5	30411005.D
Level 3	STD3 240-81611/4	30411004.D
Level 4	STD4 240-81611/3	30411003.D
Level 5	STD5 240-81611/2	30411002.D
Level 6	STD6 240-81611/10	30411010.D
Level 7	STD7 240-81611/9	30411009.D
Level 8	STD8 240-81611/8	30411008.D
Level 9	STD9 240-81611/7	30411007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5077	0.8345 0.5355	0.6096 0.5712	0.5723 0.5485	0.5484	Ave		0.5910				17.0		20.0			
N-Nitrosodimethylamine	0.6705	0.6142 0.7240	0.5757 0.7721	0.5872 0.7488	0.6419	Ave		0.6668				11.0		20.0			
Pyridine	1.2317	1.1026 1.2779	1.1852 1.4178	1.1447 1.3639	1.1702	Ave		1.2367				8.9		20.0			
Benzaldehyde	1.1249 1.0449	1.0583 1.0812	1.0682 1.1599	1.0922 1.0807	1.0839	Ave		1.0882			0.0100	3.2		20.0			
Phenol	1.4667	1.5399 1.5218	1.4167 1.6495	1.4394 1.6083	1.4943	Ave		1.5171			0.8000	5.3		20.0			
Aniline	1.8148	1.7784 1.9149	1.7438 2.0710	1.7565 2.0147	1.8540	Ave		1.8685				6.5		20.0			
Bis(2-chloroethyl)ether	1.1033	1.2234 1.1759	1.1542 1.2689	1.1207 1.2266	1.1205	Ave		1.1742			0.7000	5.1		20.0			
2-Chlorophenol	1.1629	1.2275 1.2455	1.1526 1.3481	1.1518 1.2918	1.2072	Ave		1.2234			0.8000	5.8		20.0			
1,3-Dichlorobenzene	1.2781	1.2588 1.3219	1.2627 1.4607	1.2751 1.3977	1.3248	Ave		1.3225				5.5		20.0			
1,4-Dichlorobenzene	1.3065	1.3310 1.3551	1.3000 1.4638	1.2381 1.4277	1.3723	Ave		1.3493				5.4		20.0			
Benzyl alcohol	0.7618	0.7103 0.7799	0.7415 0.8771	0.7511 0.8324	0.7602	Ave		0.7768				6.9		20.0			
1,2-Dichlorobenzene	1.2420	1.2455 1.2772	1.3006 1.3837	1.2478 1.3461	1.2559	Ave		1.2873				4.1		20.0			
2-Methylphenol	1.0801	1.0155 1.1189	1.0441 1.2414	1.0430 1.1821	1.1117	Ave		1.1046			0.7000	6.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
bis (2-chloroisopropyl) ether	1.7762	1.7526 1.7827	1.7706 1.9261	1.7716 1.8305	1.7485	Ave		1.7948				3.3		20.0			
Indene	2.1892	2.2101 2.3103	2.1177 2.5233	2.2032 2.4546	2.2191	Ave		2.2784				6.2		20.0			
3 & 4 Methylphenol	1.1463	0.9811 1.2044	1.0504 1.3031	1.1118 1.2655	1.1459	Ave		1.1511				9.3		20.0			
N-Nitrosodi-n-propylamine	0.8163	0.7284 0.8309	0.8275 0.9342	0.7561 0.8767	0.8224	Ave		0.8241			0.5000	7.8		20.0			
Acetophenone	1.6837	1.6774 1.7441	1.6239 1.9230	1.5986 1.8236	1.6542	Ave		1.7161			0.0100	6.4		20.0			
Hexachloroethane	0.5024	0.4873 0.5185	0.5391 0.5799	0.4851 0.5583	0.5013	Ave		0.5215			0.3000	6.6		20.0			
Nitrobenzene	0.3393	0.2935 0.3397	0.3186 0.3686	0.3503 0.3739	0.3367	Ave		0.3401			0.2000	7.6		20.0			
Isophorone	0.6024	0.5382 0.6055	0.6003 0.6631	0.5893 0.6719	0.6114	Ave		0.6103			0.4000	6.9		20.0			
2-Nitrophenol	0.1688	0.1483 0.1670	0.1364 0.1821	0.1540 0.1824	0.1598	Ave		0.1624			0.1000	9.9		20.0			
2,4-Dimethylphenol	0.3088	0.3026 0.3127	0.2903 0.3293	0.3064 0.3322	0.3090	Ave		0.3114			0.2000	4.4		20.0			
Benzoic acid	0.1733	0.2118 0.1947	0.1207 0.2074	0.1332 0.2151	0.1529	Lin	-0.375	0.2157							0.9940		0.9900
Bis(2-chloroethoxy)methane	0.3578	0.3487 0.3609	0.3198 0.3926	0.3456 0.3911	0.3593	Ave		0.3595			0.3000	6.6		20.0			
2,4-Dichlorophenol	0.2592	0.2195 0.2599	0.2327 0.2892	0.2476 0.2809	0.2592	Ave		0.2560			0.2000	9.0		20.0			
1,2,4-Trichlorobenzene	0.2995	0.2868 0.2969	0.2893 0.3162	0.2946 0.3235	0.2918	Ave		0.2998				4.4		20.0			
Naphthalene	0.9657 0.9168	0.8889 0.9018	0.8702 0.9805	0.9202 0.9845	0.9227	Ave		0.9279			0.7000	4.4		20.0			
4-Chloroaniline	0.3866	0.3451 0.3850	0.3615 0.4233	0.3894 0.4252	0.3775	Ave		0.3867			0.0100	7.1		20.0			
Hexachlorobutadiene	0.1829	0.1673 0.1847	0.1820 0.1945	0.1819 0.1972	0.1770	Ave		0.1834			0.0100	5.1		20.0			
Caprolactam	0.0866	0.0817 0.0836	0.0907 0.0919	0.0870 0.0878	0.0924	Ave		0.0877			0.0100	4.4		20.0			
4-Chloro-3-methylphenol	0.2777	0.2476 0.2755	0.2376 0.3075	0.2633 0.3071	0.2721	Ave		0.2736			0.2000	9.1		20.0			
2-Methylnaphthalene	0.6263 0.6202	0.5993 0.6159	0.5928 0.6767	0.6071 0.6784	0.6013	Ave		0.6242			0.4000	5.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Methylnaphthalene	0.6328 0.5706	0.5272 0.5708	0.5726 0.6255	0.5674 0.6304	0.5711	Ave		0.5854				6.2		20.0			
Hexachlorocyclopentadiene	0.3244	0.2458 0.3297	0.2857 0.3650	0.3036 0.3694	0.3168	Ave		0.3175			0.0500	13.0		20.0			
1,2,4,5-Tetrachlorobenzene	0.5296	0.4883 0.5279	0.5034 0.5791	0.5408 0.5648	0.5136	Ave		0.5309			0.0100	5.7		20.0			
2,4,6-Trichlorophenol	0.3362	0.2737 0.3312	0.3026 0.3733	0.3317 0.3699	0.3209	Ave		0.3299			0.2000	9.9		20.0			
2,4,5-Trichlorophenol	0.3490	0.2619 0.3582	0.3071 0.3906	0.3430 0.3868	0.3408	Ave		0.3422			0.2000	12.0		20.0			
1,1'-Biphenyl	1.4183 1.2888	1.2052 1.2646	1.1996 1.3914	1.2515 1.3602	1.2601	Ave		1.2933			0.0100	6.1		20.0			
2-Chloronaphthalene	1.0870 0.9665	0.8911 0.9648	0.9411 1.0574	0.9751 1.0424	0.9318	Ave		0.9841			0.8000	6.6		20.0			
2-Nitroaniline	0.3074	0.2641 0.3142	0.2773 0.3526	0.2742 0.3386	0.2927	Ave		0.3026			0.0100	10.0		20.0			
Dimethyl phthalate	1.1172	1.0846 1.1094	1.0775 1.2348	1.0545 1.2026	1.0662	Ave		1.1183			0.0100	5.9		20.0			
1,3-Dinitrobenzene	0.1862	0.1329 0.1901	0.1536 0.2183	0.1528 0.2170	0.1706	Ave		0.1777				17.0		20.0			
2,6-Dinitrotoluene	0.2553	0.1978 0.2525	0.2167 0.2807	0.2325 0.2829	0.2360	Ave		0.2443				12.0		20.0			
Acenaphthylene	1.5800 1.5776	1.3588 1.5783	1.4670 1.7626	1.5518 1.7191	1.5090	Ave		1.5671			0.9000	7.8		20.0			
3-Nitroaniline	0.2749	0.2109 0.2839	0.2066 0.3187	0.2461 0.3064	0.2613	Ave		0.2636			0.0100	16.0		20.0			
Acenaphthene	1.2630 1.0539	1.0224 1.0466	1.0199 1.1546	1.0598 1.1462	1.0353	Ave		1.0891			0.9000	7.5		20.0			
2,4-Dinitrophenol	0.1795	+++++ 0.1894	0.0973 0.2196	0.1260 0.2193	0.1543	Lin1	-0.327	0.2151			0.0100				0.9920		0.9900
4-Nitrophenol	0.1610	0.0978 0.1574	0.1282 0.1791	0.1442 0.1740	0.1493	Ave		0.1489				18.0		20.0			
2,4-Dinitrotoluene	0.3426	0.2407 0.3489	0.2497 0.3844	0.3036 0.3783	0.3175	Ave		0.3207			0.2000	17.0		20.0			
Dibenzofuran	1.5111 1.4426	1.3728 1.4530	1.3994 1.5940	1.4588 1.5818	1.3965	Ave		1.4678			0.8000	5.4		20.0			
2,3,4,6-Tetrachlorophenol	0.3110	0.2471 0.3089	0.2793 0.3440	0.2794 0.3393	0.2821	Ave		0.2989			0.0100	11.0		20.0			
Diethyl phthalate	1.1246	1.1681 1.1197	1.1337 1.2355	1.1285 1.2237	1.1048	Ave		1.1548			0.0100	4.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chlorophenyl phenyl ether	0.6262	0.5811 0.6191	0.6284 0.6858	0.6119 0.6730	0.5997	Ave		0.6282			0.4000	5.6		20.0			
4-Nitroaniline	0.2911	0.2107 0.2803	0.2421 0.3216	0.2520 0.3191	0.2726	Ave		0.2737			0.0100	14.0		20.0			
Fluorene	1.2068 1.1834	1.0566 1.1954	1.1679 1.3225	1.1615 1.2901	1.1557	Ave		1.1933			0.9000	6.5		20.0			
4,6-Dinitro-2-methylphenol	0.1289	0.0558 0.1298	0.0789 0.1464	0.0935 0.1440	0.1187	Lin1	-0.121	0.1418			0.0100				0.9960		0.9900
N-Nitrosodiphenylamine	0.4779	0.4226 0.4816	0.4399 0.5227	0.4584 0.5126	0.4667	Ave		0.4728			0.0100	7.2		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.6336	0.5864 0.6369	0.6119 0.6928	0.6208 0.6699	0.6342	Ave		0.6357				5.2		20.0			
Azobenzene	0.6300	0.5861 0.6367	0.6148 0.6928	0.6208 0.6699	0.6342	Ave		0.6357				5.2		20.0			
4-Bromophenyl phenyl ether	0.1772	0.1512 0.1817	0.1713 0.1943	0.1799 0.1920	0.1797	Ave		0.1784			0.1000	7.5		20.0			
Hexachlorobenzene	0.1691 0.1781	0.1726 0.1763	0.1809 0.1922	0.1793 0.1925	0.1863	Ave		0.1808			0.1000	4.5		20.0			
Atrazine	0.1849	0.1560 0.1790	0.1710 0.1902	0.1834 0.1823	0.1882	Ave		0.1794			0.0100	6.2		20.0			
Pentachlorophenol	0.1241	0.0810 0.1209	0.1010 0.1378	0.1095 0.1363	0.1237	Ave		0.1168			0.0500	16.0		20.0			
Phenanthrene	1.0188 0.9071	0.8521 0.9132	0.8991 0.9840	0.9034 0.9567	0.9132	Ave		0.9275			0.7000	5.4		20.0			
Anthracene	0.8866 0.9311	0.8129 0.9350	0.8807 1.0202	0.9153 0.9938	0.9240	Ave		0.9222			0.7000	6.6		20.0			
Carbazole	0.8333	0.7825 0.8346	0.8332 0.9127	0.8519 0.9019	0.8485	Ave		0.8498			0.0100	4.9		20.0			
Di-n-butyl phthalate	1.0417	0.9286 1.0511	1.0070 1.1526	0.9779 1.1240	1.0335	Ave		1.0396			0.0100	7.0		20.0			
Fluoranthene	1.2068 1.0921	0.9771 1.1054	0.9808 1.2065	1.0529 1.1632	1.0622	Ave		1.0941			0.6000	7.9		20.0			
Benzidine	0.4161	0.4013 0.4157	0.4486 0.4161	0.4405 0.3769	0.4112	Ave		0.4158				5.3		20.0			
Pyrene	1.1083 1.0141	0.9348 1.0253	0.9799 1.1136	1.0313 1.0851	1.0047	Ave		1.0330			0.6000	5.8		20.0			
Butyl benzyl phthalate	0.4117	0.3030 0.4168	0.3398 0.4566	0.3721 0.4485	0.3999	Ave		0.3936			0.0100	13.0		20.0			
3,3'-Dichlorobenzidine	0.3376	0.2357 0.3430	0.2856 0.3836	0.3147 0.3787	0.3322	Ave		0.3264			0.0100	15.0		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Bis(2-ethylhexyl) phthalate	0.5850	0.4275 0.5823	0.4824 0.6460	0.5244 0.6268	0.5552	Ave		0.5537			0.0100	13.0		20.0			
Benzo[a]anthracene	1.1431 0.9655	0.9030 0.9806	0.9516 1.0563	0.9662 1.0338	0.9569	Ave		0.9952			0.8000	7.2		20.0			
Chrysene	1.0360 0.9055	0.7835 0.9036	0.8447 0.9781	0.8976 0.9717	0.9006	Ave		0.9135			0.7000	8.2		20.0			
Di-n-octyl phthalate	1.1402	0.6157 1.1916	0.7191 1.3337	0.9151 1.3173	1.0931	Lin1	-0.503	1.2895			0.0100				0.9960		0.9900
Benzo[b]fluoranthene	0.9596 1.1087	0.8533 1.1495	0.9760 1.2207	1.0128 1.2714	1.1098	Ave		1.0735			0.7000	12.0		20.0			
Benzo[k]fluoranthene	0.9973 1.2058	1.0290 1.2586	1.0981 1.3653	1.1232 1.2605	1.1718	Ave		1.1677			0.7000	10.0		20.0			
Benzo[a]pyrene	0.7710 1.0493	0.8163 1.1001	0.9005 1.2052	0.9519 1.1607	1.0154	Ave		0.9967			0.7000	15.0		20.0			
Indeno[1,2,3-cd]pyrene	1.0612 1.1113	0.9120 1.1724	0.9325 1.2859	1.0117 1.2372	1.1157	Ave		1.0933			0.5000	12.0		20.0			
Dibenz(a,h)anthracene	0.8994 0.9219	0.7442 0.9816	0.7837 1.0774	0.8281 1.0500	0.9168	Ave		0.9115			0.4000	12.0		20.0			
Benzo[g,h,i]perylene	1.0643 0.9223	0.7994 0.9679	0.8200 1.0501	0.8306 1.0224	0.9211	Ave		0.9331			0.5000	11.0		20.0			
2-Fluorophenol (Surr)	1.1122	1.1195 1.1595	1.1312 1.2756	1.0965 1.2281	1.1353	Ave		1.1572				5.4		20.0			
Phenol-d5 (Surr)	1.4695	1.6278 1.5416	1.5768 1.6570	1.3868 1.6105	1.4692	Ave		1.5424				6.1		20.0			
Nitrobenzene-d5 (Surr)	0.4885 0.3570	0.3269 0.3625	0.3360 0.3934	0.3463 0.3939	0.3617	Ave		0.3740				13.0		20.0			
2-Fluorobiphenyl (Surr)	1.6664 1.2044	1.1980 1.2195	1.2253 1.3427	1.2459 1.3189	1.1859	Ave		1.2897				12.0		20.0			
2,4,6-Tribromophenol (Surr)	0.1455	0.1370 0.1470	0.1406 0.1633	0.1415 0.1593	0.1364	Ave		0.1463				6.8		20.0			
Terphenyl-d14 (Surr)	1.0628 0.7324	0.8004 0.7342	0.7073 0.8019	0.7462 0.7796	0.7182	Ave		0.7870				14.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81611/6	30411006.D
Level 2	STD2 240-81611/5	30411005.D
Level 3	STD3 240-81611/4	30411004.D
Level 4	STD4 240-81611/3	30411003.D
Level 5	STD5 240-81611/2	30411002.D
Level 6	STD6 240-81611/10	30411010.D
Level 7	STD7 240-81611/9	30411009.D
Level 8	STD8 240-81611/8	30411008.D
Level 9	STD9 240-81611/7	30411007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave		16216	22470	47473	113217		0.500	1.00	2.00	5.00
			236614	318938	456631	613896		10.0	15.0	20.0	25.0	
N-Nitrosodimethylamine	DCB	Ave		11935	21220	48714	132532		0.500	1.00	2.00	5.00
			312475	431177	617209	838090		10.0	15.0	20.0	25.0	
Pyridine	DCB	Ave		21426	43683	94956	241604		0.500	1.00	2.00	5.00
			574011	761099	1133431	1526421		10.0	15.0	20.0	25.0	
Benzaldehyde	DCB	Ave	9652	41129	78743	181212	447558	0.200	1.00	2.00	4.00	10.0
			973909	1287806	1854574	2419130		20.0	30.0	40.0	50.0	
Phenol	DCB	Ave		29924	52217	119402	308524		0.500	1.00	2.00	5.00
			683517	906309	1318676	1800015		10.0	15.0	20.0	25.0	
Aniline	DCB	Ave		34557	64273	145706	382787		0.500	1.00	2.00	5.00
			845753	1140436	1655621	2254888		10.0	15.0	20.0	25.0	
Bis(2-chloroethyl)ether	DCB	Ave		23772	42542	92963	231353		0.500	1.00	2.00	5.00
			514179	700352	1014397	1372859		10.0	15.0	20.0	25.0	
2-Chlorophenol	DCB	Ave		23853	42482	95545	249252		0.500	1.00	2.00	5.00
			541952	741747	1077716	1445797		10.0	15.0	20.0	25.0	
1,3-Dichlorobenzene	DCB	Ave		24460	46541	105773	273536		0.500	1.00	2.00	5.00
			595610	787251	1167765	1564313		10.0	15.0	20.0	25.0	
1,4-Dichlorobenzene	DCB	Ave		25863	47915	102704	283326		0.500	1.00	2.00	5.00
			608860	807048	1170215	1597863		10.0	15.0	20.0	25.0	
Benzyl alcohol	DCB	Ave		13802	27328	62306	156954		0.500	1.00	2.00	5.00
			355010	464490	701146	931573		10.0	15.0	20.0	25.0	
1,2-Dichlorobenzene	DCB	Ave		24202	47938	103511	259307		0.500	1.00	2.00	5.00
			578791	760626	1106213	1506525		10.0	15.0	20.0	25.0	
2-Methylphenol	DCB	Ave		19733	38481	86519	229526		0.500	1.00	2.00	5.00
			503367	666396	992388	1322999		10.0	15.0	20.0	25.0	
bis (2-chloroisopropyl) ether	DCB	Ave		34056	65259	146959	361011		0.500	1.00	2.00	5.00
			827782	1061693	1539760	2048685		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Indene	DCB	Ave		85891	156104	365529	916354		1.00	2.00	4.00	10.0
			2040512	2751804	4034385	5494399		20.0	30.0	40.0	50.0	
3 & 4 Methylphenol	DCB	Ave		19065	38715	92225	236586		0.500	1.00	2.00	5.00
			534212	717322	1041736	1416340		10.0	15.0	20.0	25.0	
N-Nitrosodi-n-propylamine	DCB	Ave		14155	30501	62719	169804		0.500	1.00	2.00	5.00
			380422	494855	746863	981255		10.0	15.0	20.0	25.0	
Acetophenone	DCB	Ave		32595	59854	132615	341535		0.500	1.00	2.00	5.00
			784632	1038746	1537279	2040968		10.0	15.0	20.0	25.0	
Hexachloroethane	DCB	Ave		9469	19869	40239	103497		0.500	1.00	2.00	5.00
			234155	308811	463611	624884		10.0	15.0	20.0	25.0	
Nitrobenzene	NPT	Ave		22083	45496	109090	266273		0.500	1.00	2.00	5.00
			602745	798340	1174656	1602028		10.0	15.0	20.0	25.0	
Isophorone	NPT	Ave		40501	85728	183544	483451		0.500	1.00	2.00	5.00
			1069946	1422719	2113040	2878480		10.0	15.0	20.0	25.0	
2-Nitrophenol	NPT	Ave		11162	19477	47968	126382		0.500	1.00	2.00	5.00
			299767	392319	580438	781408		10.0	15.0	20.0	25.0	
2,4-Dimethylphenol	NPT	Ave		22771	41451	95441	244364		0.500	1.00	2.00	5.00
			548402	734837	1049259	1423353		10.0	15.0	20.0	25.0	
Benzoic acid	NPT	Lin		31871	34463	82973	241835		1.00	2.00	4.00	10.0
			615619	915153	1321942	1843013		20.0	30.0	40.0	50.0	
Bis(2-chloroethoxy)methane	NPT	Ave		26240	45666	107632	284126		0.500	1.00	2.00	5.00
			635518	847988	1251022	1675745		10.0	15.0	20.0	25.0	
2,4-Dichlorophenol	NPT	Ave		16521	33229	77111	204934		0.500	1.00	2.00	5.00
			460330	610741	921670	1203520		10.0	15.0	20.0	25.0	
1,2,4-Trichlorobenzene	NPT	Ave		21585	41318	91758	230746		0.500	1.00	2.00	5.00
			532016	697687	1007617	1386001		10.0	15.0	20.0	25.0	
Naphthalene	NPT	Ave	15367	66890	124268	286602	729643	0.100	0.500	1.00	2.00	5.00
			1628498	2119044	3124385	4217741		10.0	15.0	20.0	25.0	
4-Chloroaniline	NPT	Ave		25968	51618	121294	298492		0.500	1.00	2.00	5.00
			686669	904763	1349033	1821542		10.0	15.0	20.0	25.0	
Hexachlorobutadiene	NPT	Ave		12593	25988	56648	139989		0.500	1.00	2.00	5.00
			324885	434009	619873	844773		10.0	15.0	20.0	25.0	
Caprolactam	NPT	Ave		12290	25916	54163	146197		1.00	2.00	4.00	10.0
			307578	393097	585692	752059		20.0	30.0	40.0	50.0	
4-Chloro-3-methylphenol	NPT	Ave		18631	33930	82015	215149		0.500	1.00	2.00	5.00
			493306	647307	979841	1315867		10.0	15.0	20.0	25.0	
2-Methylnaphthalene	NPT	Ave	9966	45100	84651	189083	475473	0.100	0.500	1.00	2.00	5.00
			1101656	1447157	2156428	2906370		10.0	15.0	20.0	25.0	
1-Methylnaphthalene	NPT	Ave	10070	39669	81772	176733	451635	0.100	0.500	1.00	2.00	5.00
			1013523	1341167	1993146	2701042		10.0	15.0	20.0	25.0	
Hexachlorocyclopentadiene	ANT	Ave		11210	24092	56659	154932		0.500	1.00	2.00	5.00
			352302	473002	703575	973410		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,4,5-Tetrachlorobenzene	ANT	Ave		22274	42448	100934	251173		0.500	1.00	2.00	5.00
			575040	757357	1116276	1488320		10.0	15.0	20.0	25.0	
2,4,6-Trichlorophenol	ANT	Ave		12486	25520	61912	156928		0.500	1.00	2.00	5.00
			365061	475201	719538	974731		10.0	15.0	20.0	25.0	
2,4,5-Trichlorophenol	ANT	Ave		11947	25900	64027	166638		0.500	1.00	2.00	5.00
			378966	513976	752941	1019196		10.0	15.0	20.0	25.0	
1,1'-Biphenyl	ANT	Ave	13819	54974	101163	233588	616231	0.100	0.500	1.00	2.00	5.00
			1399472	1814335	2682254	3584486		10.0	15.0	20.0	25.0	
2-Chloronaphthalene	ANT	Ave	10591	40645	79364	181990	455687	0.100	0.500	1.00	2.00	5.00
			1049493	1384207	2038401	2746950		10.0	15.0	20.0	25.0	
2-Nitroaniline	ANT	Ave		12047	23386	51178	143157		0.500	1.00	2.00	5.00
			333811	450748	679648	892305		10.0	15.0	20.0	25.0	
Dimethyl phthalate	ANT	Ave		49472	90860	196808	521385		0.500	1.00	2.00	5.00
			1213193	1591726	2380318	3169045		10.0	15.0	20.0	25.0	
1,3-Dinitrobenzene	ANT	Ave		6063	12949	28524	83408		0.500	1.00	2.00	5.00
			202189	272790	420859	571915		10.0	15.0	20.0	25.0	
2,6-Dinitrotoluene	ANT	Ave		9021	18273	43396	115405		0.500	1.00	2.00	5.00
			277211	362216	541120	745495		10.0	15.0	20.0	25.0	
Acenaphthylene	ANT	Ave	15394	61980	123712	289640	737944	0.100	0.500	1.00	2.00	5.00
			1713120	2264456	3397756	4530188		10.0	15.0	20.0	25.0	
3-Nitroaniline	ANT	Ave		9622	17426	45929	127765		0.500	1.00	2.00	5.00
			298459	407279	614393	807490		10.0	15.0	20.0	25.0	
Acenaphthene	ANT	Ave	12306	46636	86005	197799	506282	0.100	0.500	1.00	2.00	5.00
			1144426	1501648	2225735	3020416		10.0	15.0	20.0	25.0	
2,4-Dinitrophenol	ANT	Lin1		+++++	16415	47020	150881		+++++	2.00	4.00	10.0
			389816	543421	846839	1155637		20.0	30.0	40.0	50.0	
4-Nitrophenol	ANT	Ave		8926	21620	53838	146003		1.00	2.00	4.00	10.0
			349554	451620	690447	916895		20.0	30.0	40.0	50.0	
2,4-Dinitrotoluene	ANT	Ave		10980	21056	56656	155258		0.500	1.00	2.00	5.00
			371972	500634	741070	996826		10.0	15.0	20.0	25.0	
Dibenzofuran	ANT	Ave	14723	62615	118010	272285	682932	0.100	0.500	1.00	2.00	5.00
			1566499	2084699	3072843	4168388		10.0	15.0	20.0	25.0	
2,3,4,6-Tetrachlorophenol	ANT	Ave		11272	23549	52142	137950		0.500	1.00	2.00	5.00
			337721	443171	663232	894135		10.0	15.0	20.0	25.0	
Diethyl phthalate	ANT	Ave		53280	95600	210620	540269		0.500	1.00	2.00	5.00
			1221169	1606486	2381820	3224659		10.0	15.0	20.0	25.0	
4-Chlorophenyl phenyl ether	ANT	Ave		26505	52994	114212	293256		0.500	1.00	2.00	5.00
			679997	888302	1322001	1773518		10.0	15.0	20.0	25.0	
4-Nitroaniline	ANT	Ave		9611	20418	47031	133302		0.500	1.00	2.00	5.00
			316074	402223	619876	840862		10.0	15.0	20.0	25.0	
Fluorene	ANT	Ave	11758	48194	98484	216784	565180	0.100	0.500	1.00	2.00	5.00
			1285001	1715125	2549442	3399694		10.0	15.0	20.0	25.0	

FORM VI

GC/MS SEMI VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4,6-Dinitro-2-methylphenol	PHN	Lin1		9577	24885	64543	208660		1.00	2.00	4.00	10.0
			521792	687048	1067240	1444264		20.0	30.0	40.0	50.0	
N-Nitrosodiphenylamine	PHN	Ave		72547	138810	316413	820810		1.00	2.00	4.00	10.0
			1935122	2548336	3811548	5139794		20.0	30.0	40.0	50.0	
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave		50341	96537	214273	557654		0.500	1.00	2.00	5.00
			1282930	1684936	2525643	3358653		10.0	15.0	20.0	25.0	
Azobenzene	PHN	Ave		50309	96999	214273	557619		0.500	1.00	2.00	5.00
			1275629	1684573	2525643	3358700		10.0	15.0	20.0	25.0	
4-Bromophenyl phenyl ether	PHN	Ave		12979	27021	62072	158021		0.500	1.00	2.00	5.00
			358827	480803	708183	962693		10.0	15.0	20.0	25.0	
Hexachlorobenzene	PHN	Ave	3107	14818	28543	61873	163849	0.100	0.500	1.00	2.00	5.00
			360567	466336	700791	965125		10.0	15.0	20.0	25.0	
Atrazine	PHN	Ave		26777	53965	126618	331047		1.00	2.00	4.00	10.0
			748683	947131	1386960	1827685		20.0	30.0	40.0	50.0	
Pentachlorophenol	PHN	Ave		13906	31861	75597	217571		1.00	2.00	4.00	10.0
			502665	639454	1004742	1367227		20.0	30.0	40.0	50.0	
Phenanthrene	PHN	Ave	18717	73146	141845	311780	802921	0.100	0.500	1.00	2.00	5.00
			1836638	2415849	3587420	4796788		10.0	15.0	20.0	25.0	
Anthracene	PHN	Ave	16288	69781	138944	315893	812471	0.100	0.500	1.00	2.00	5.00
			1885354	2473597	3719428	4982659		10.0	15.0	20.0	25.0	
Carbazole	PHN	Ave		67174	131456	294031	746052		0.500	1.00	2.00	5.00
			1687265	2208075	3327408	4521809		10.0	15.0	20.0	25.0	
Di-n-butyl phthalate	PHN	Ave		79716	158879	337508	908739		0.500	1.00	2.00	5.00
			2109283	2780848	4202076	5635613		10.0	15.0	20.0	25.0	
Fluoranthene	PHN	Ave	22172	83881	154743	363378	933990	0.100	0.500	1.00	2.00	5.00
			2211161	2924418	4398503	5831952		10.0	15.0	20.0	25.0	
Benzidine	CRY	Ave		71149	146604	322117	789265		1.00	2.00	4.00	10.0
			1838302	2393102	3323668	4153761		20.0	30.0	40.0	50.0	
Pyrene	CRY	Ave	20499	82865	160116	377058	964230	0.100	0.500	1.00	2.00	5.00
			2239972	2951426	4447349	5979420		10.0	15.0	20.0	25.0	
Butyl benzyl phthalate	CRY	Ave		26854	55525	136037	383811		0.500	1.00	2.00	5.00
			909395	1199894	1823367	2471624		10.0	15.0	20.0	25.0	
3,3'-Dichlorobenzidine	CRY	Ave		41792	93330	230130	637656		1.00	2.00	4.00	10.0
			1491428	1974516	3063990	4172967		20.0	30.0	40.0	50.0	
Bis(2-ethylhexyl) phthalate	CRY	Ave		37896	78819	191723	532849		0.500	1.00	2.00	5.00
			1292173	1676382	2580079	3454084		10.0	15.0	20.0	25.0	
Benzo[a]anthracene	CRY	Ave	21142	80043	155494	353258	918310	0.100	0.500	1.00	2.00	5.00
			2132546	2822861	4218541	5696707		10.0	15.0	20.0	25.0	
Chrysene	CRY	Ave	19161	69446	138022	328187	864351	0.100	0.500	1.00	2.00	5.00
			1999965	2601044	3906119	5354526		10.0	15.0	20.0	25.0	
Di-n-octyl phthalate	PRY	Lin1		42479	93267	269976	828145		0.500	1.00	2.00	5.00
			1981231	2634916	4175696	5738584		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzo[b]fluoranthene	PRY	Ave	14443 1926505	58877 2541953	126589 3822093	298800 5538757	840758	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[k]fluoranthene	PRY	Ave	15010 2095142	70996 2783215	142426 4274606	331366 5491211	887719	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[a]pyrene	PRY	Ave	11605 1823222	56321 2432666	116802 3773468	280829 5056335	769294	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Indeno[1,2,3-cd]pyrene	PRY	Ave	15972 1931031	62924 2592538	120947 4025972	298487 5389622	845237	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dibenz(a,h)anthracene	PRY	Ave	13537 1601821	51347 2170597	101656 3373446	244309 4574297	694560	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[g,h,i]perylene	PRY	Ave	16019 1602658	55155 2140344	106360 3287841	245044 4453982	697853	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorophenol (Surr)	DCB	Ave	518302	21754 690564	41692 1019750	90958 1374472	234391	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Phenol-d5 (Surr)	DCB	Ave	684817	31631 918111	58117 1324647	115038 1802479	303341	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene-d5 (Surr)	NPT	Ave	7773 634034	24603 851694	47979 1253671	107870 1687586	285992	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorobiphenyl (Surr)	ANT	Ave	16236 1307821	54644 1749682	103329 2588455	232548 3475644	579916	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Tribromophenol (Surr)	ANT	Ave	158023	6248 210950	11857 314870	26408 419685	66719	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Terphenyl-d14 (Surr)	CRY	Ave	19657 1617749	70948 2113488	115574 3202684	272821 4296101	689248	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5593		9.46	10.0	-5.4	30.0
N-Nitrosodimethylamine	Ave	0.6668	0.7036		10.6	10.0	5.5	30.0
Pyridine	Ave	1.237	1.378		11.1	10.0	11.4	30.0
Benzaldehyde	Ave	1.088	1.151	0.0100	21.2	20.0	5.8	30.0
Phenol	Ave	1.517	1.647	0.8000	10.9	10.0	8.6	30.0
Aniline	Ave	1.869	2.013		10.8	10.0	7.7	30.0
Bis(2-chloroethyl)ether	Ave	1.174	1.246	0.7000	10.6	10.0	6.1	30.0
2-Chlorophenol	Ave	1.223	1.305	0.8000	10.7	10.0	6.7	30.0
1,3-Dichlorobenzene	Ave	1.322	1.426		10.8	10.0	7.8	30.0
1,4-Dichlorobenzene	Ave	1.349	1.476		10.9	10.0	9.4	30.0
Benzyl alcohol	Ave	0.7768	0.8665		11.2	10.0	11.6	30.0
1,2-Dichlorobenzene	Ave	1.287	1.390		10.8	10.0	8.0	30.0
2-Methylphenol	Ave	1.105	1.225	0.7000	11.1	10.0	10.9	30.0
bis (2-chloroisopropyl) ether	Ave	1.795	2.305		9.25	7.20	28.4	30.0
Indene	Ave	2.278	2.448		21.5	20.0	7.4	30.0
3 & 4 Methylphenol	Ave	1.151	1.289		11.2	10.0	12.0	30.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.8916	0.5000	10.8	10.0	8.2	30.0
Acetophenone	Ave	1.716	1.861	0.0100	10.8	10.0	8.5	30.0
Hexachloroethane	Ave	0.5215	0.5613	0.3000	10.8	10.0	7.6	30.0
Nitrobenzene	Ave	0.3401	0.3689	0.2000	10.8	10.0	8.5	30.0
Isophorone	Ave	0.6103	0.6861	0.4000	11.2	10.0	12.4	30.0
2-Nitrophenol	Ave	0.1624	0.1809	0.1000	11.1	10.0	11.4	30.0
2,4-Dimethylphenol	Ave	0.3114	0.3269	0.2000	10.5	10.0	5.0	30.0
Benzoic acid	Lin		0.2115		21.3	20.0	6.7	30.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3816	0.3000	10.6	10.0	6.2	30.0
2,4-Dichlorophenol	Ave	0.2560	0.2820	0.2000	11.0	10.0	10.1	30.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.3259		10.9	10.0	8.7	30.0
Naphthalene	Ave	0.9279	1.002	0.7000	10.8	10.0	7.9	30.0
4-Chloroaniline	Ave	0.3867	0.4119	0.0100	10.7	10.0	6.5	30.0
Hexachlorobutadiene	Ave	0.1834	0.1927	0.0100	10.5	10.0	5.1	30.0
Caprolactam	Ave	0.0877	0.0951	0.0100	21.7	20.0	8.4	30.0
4-Chloro-3-methylphenol	Ave	0.2736	0.3035	0.2000	11.1	10.0	11.0	30.0
2-Methylnaphthalene	Ave	0.6242	0.6650	0.4000	10.7	10.0	6.5	30.0
1-Methylnaphthalene	Ave	0.5854	0.6077		10.4	10.0	3.8	30.0
Hexachlorocyclopentadiene	Ave	0.3175	0.3659	0.0500	11.5	10.0	15.2	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.5788	0.0100	10.9	10.0	9.0	30.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3734	0.2000	11.3	10.0	13.2	30.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3828	0.2000	11.2	10.0	11.9	30.0
1,1'-Biphenyl	Ave	1.293	1.393	0.0100	10.8	10.0	7.7	30.0
2-Chloronaphthalene	Ave	0.9841	1.075	0.8000	10.9	10.0	9.3	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3026	0.3474	0.0100	11.5	10.0	14.8	30.0
Dimethyl phthalate	Ave	1.118	1.229	0.0100	11.0	10.0	9.9	30.0
1,3-Dinitrobenzene	Ave	0.1777	0.2075		11.7	10.0	16.8	30.0
2,6-Dinitrotoluene	Ave	0.2443	0.2876		11.8	10.0	17.7	30.0
Acenaphthylene	Ave	1.567	1.776	0.9000	11.3	10.0	13.3	30.0
3-Nitroaniline	Ave	0.2636	0.3091	0.0100	11.7	10.0	17.3	30.0
2,4-Dinitrophenol	Lin1		0.1970	0.0100	19.8	20.0	-0.8	30.0
Acenaphthene	Ave	1.089	1.180	0.9000	10.8	10.0	8.4	30.0
4-Nitrophenol	Ave	0.1489	0.1818		24.4	20.0	22.1	30.0
2,4-Dinitrotoluene	Ave	0.3207	0.3752	0.2000	11.7	10.0	17.0	30.0
Dibenzofuran	Ave	1.468	1.604	0.8000	10.9	10.0	9.3	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.2989	0.3408	0.0100	11.4	10.0	14.0	30.0
Diethyl phthalate	Ave	1.155	1.261	0.0100	10.9	10.0	9.2	30.0
4-Chlorophenyl phenyl ether	Ave	0.6282	0.6959	0.4000	11.1	10.0	10.8	30.0
4-Nitroaniline	Ave	0.2737	0.3216	0.0100	11.7	10.0	17.5	30.0
Fluorene	Ave	1.193	1.339	0.9000	11.2	10.0	12.2	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.1475	0.0100	21.7	20.0	8.3	30.0
N-Nitrosodiphenylamine	Ave	0.4728	0.5209	0.0100	22.0	20.0	10.2	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.6357	0.7132		11.2	10.0	12.2	30.0
Azobenzene	Ave	0.6357	0.7132		11.2	10.0	12.2	30.0
4-Bromophenyl phenyl ether	Ave	0.1784	0.1987	0.1000	11.1	10.0	11.4	30.0
Hexachlorobenzene	Ave	0.1808	0.2025	0.1000	11.2	10.0	12.0	30.0
Atrazine	Ave	0.1794	0.2047	0.0100	22.8	20.0	14.1	30.0
Pentachlorophenol	Ave	0.1168	0.1432	0.0500	24.5	20.0	22.6	30.0
Phenanthrene	Ave	0.9275	1.010	0.7000	10.9	10.0	8.9	30.0
Anthracene	Ave	0.9222	1.057	0.7000	11.5	10.0	14.7	30.0
Carbazole	Ave	0.8498	0.9250	0.0100	10.9	10.0	8.8	30.0
Di-n-butyl phthalate	Ave	1.040	1.161	0.0100	11.2	10.0	11.6	30.0
Fluoranthene	Ave	1.094	1.196	0.6000	10.9	10.0	9.3	30.0
Benzidine	Ave	0.4158	0.5136		24.7	20.0	23.5	30.0
Pyrene	Ave	1.033	1.171	0.6000	11.3	10.0	13.4	30.0
Butyl benzyl phthalate	Ave	0.3936	0.4821	0.0100	12.2	10.0	22.5	30.0
3,3'-Dichlorobenzidine	Ave	0.3264	0.3892	0.0100	23.8	20.0	19.2	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.5537	0.6586	0.0100	11.9	10.0	18.9	30.0
Benzo[a]anthracene	Ave	0.995	1.126	0.8000	11.3	10.0	13.1	30.0
Chrysene	Ave	0.9135	1.061	0.7000	11.6	10.0	16.1	30.0
Di-n-octyl phthalate	Lin1		1.315	0.0100	10.6	10.0	5.9	30.0
Benzo[b]fluoranthene	Ave	1.074	1.235	0.7000	11.5	10.0	15.0	30.0
Benzo[k]fluoranthene	Ave	1.168	1.338	0.7000	11.5	10.0	14.6	30.0
Benzo[a]pyrene	Ave	0.997	1.181	0.7000	11.8	10.0	18.5	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	1.093	1.210	0.5000	11.1	10.0	10.6	30.0
Dibenz(a,h)anthracene	Ave	0.9115	1.061	0.4000	11.6	10.0	16.4	30.0
Benzo[g,h,i]perylene	Ave	0.9331	1.039	0.5000	11.1	10.0	11.3	30.0
2-Fluorophenol (Surr)	Ave	1.157	1.336		11.5	10.0	15.5	30.0
Phenol-d5 (Surr)	Ave	1.542	1.792		11.6	10.0	16.2	30.0
Nitrobenzene-d5 (Surr)	Ave	0.3740	0.4322		11.6	10.0	15.6	30.0
2-Fluorobiphenyl (Surr)	Ave	1.290	1.493		11.6	10.0	15.8	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1463	0.1771		12.1	10.0	21.0	30.0
Terphenyl-d14 (Surr)	Ave	0.7870	0.9254		11.8	10.0	17.6	30.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/12/2013 10:52

Analysis Batch Number: 81701 End Date: 04/12/2013 22:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-81701/1		04/12/2013 10:52	1	30412001.D	DB-624 0.18(mm)
CCVIS 240-81701/2		04/12/2013 11:16	1	30412002.D	DB-624 0.18(mm)
240-22680-7	MRC-MW-69A-040113	04/12/2013 22:42	1	30412031.D	DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: 30412001.D DFTPP Injection Date: 04/12/2013

Instrument ID: A4HP10 DFTPP Injection Time: 10:52

Analysis Batch No.: 81701

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	42.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.1	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	25.0 - 75.0% of mass 198	45.1	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	25.5	
365	Greater than 0.75% of mass 198	2.3	
441	Present, but less than mass 443	12.4	
442	40.0 - 110.0% of mass 198	62.0	
443	15.0 - 24.0% of mass 442	12.4	(20.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81701/2	30412002.D	04/12/2013	11:16
MRC-MW-69A-040113	240-22680-7	30412031.D	04/12/2013	22:42

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81701/2 Calibration Date: 04/12/2013 11:16

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5288		8.95	10.0	-10.5	20.0
N-Nitrosodimethylamine	Ave	0.6668	0.7125		10.7	10.0	6.9	20.0
Pyridine	Ave	1.237	1.320		10.7	10.0	6.7	20.0
Benzaldehyde	Ave	1.088	1.084	0.0100	19.9	20.0	-0.4	20.0
Phenol	Ave	1.517	1.562	0.8000	10.3	10.0	3.0	20.0
Aniline	Ave	1.869	1.870		10.0	10.0	0.0	20.0
Bis(2-chloroethyl)ether	Ave	1.174	1.150	0.7000	9.80	10.0	-2.0	20.0
2-Chlorophenol	Ave	1.223	1.222	0.8000	9.99	10.0	-0.0	20.0
1,3-Dichlorobenzene	Ave	1.322	1.315		9.94	10.0	-0.6	20.0
1,4-Dichlorobenzene	Ave	1.349	1.318		9.77	10.0	-2.3	20.0
Benzyl alcohol	Ave	0.7768	0.7722		9.94	10.0	-0.6	20.0
1,2-Dichlorobenzene	Ave	1.287	1.246		9.68	10.0	-3.2	20.0
2-Methylphenol	Ave	1.105	1.112	0.7000	10.1	10.0	0.6	20.0
bis (2-chloroisopropyl) ether	Ave	1.795	1.888		10.5	10.0	5.2	20.0
Indene	Ave	2.278	2.199		19.3	20.0	-3.5	20.0
3 & 4 Methylphenol	Ave	1.151	1.160		10.1	10.0	0.8	20.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.8099	0.5000	9.83	10.0	-1.7	20.0
Acetophenone	Ave	1.716	1.678	0.0100	9.78	10.0	-2.2	20.0
Hexachloroethane	Ave	0.5215	0.5132	0.3000	9.84	10.0	-1.6	20.0
Nitrobenzene	Ave	0.3401	0.3508	0.2000	10.3	10.0	3.2	20.0
Isophorone	Ave	0.6103	0.6138	0.4000	10.1	10.0	0.6	20.0
2-Nitrophenol	Ave	0.1624	0.1636	0.1000	10.1	10.0	0.7	20.0
2,4-Dimethylphenol	Ave	0.3114	0.3096	0.2000	9.94	10.0	-0.6	20.0
Benzoic acid	Lin		0.1769		18.1	20.0	-9.3	20.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3629	0.3000	10.1	10.0	0.9	20.0
2,4-Dichlorophenol	Ave	0.2560	0.2625	0.2000	10.3	10.0	2.5	20.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.2965		9.89	10.0	-1.1	20.0
Naphthalene	Ave	0.9279	0.9218	0.7000	9.93	10.0	-0.7	20.0
4-Chloroaniline	Ave	0.3867	0.3927	0.0100	10.2	10.0	1.5	20.0
Hexachlorobutadiene	Ave	0.1834	0.1810	0.0100	9.87	10.0	-1.3	20.0
Caprolactam	Ave	0.0877	0.0921	0.0100	21.0	20.0	4.9	20.0
4-Chloro-3-methylphenol	Ave	0.2736	0.2692	0.2000	9.84	10.0	-1.6	20.0
2-Methylnaphthalene	Ave	0.6242	0.6104	0.4000	9.78	10.0	-2.2	20.0
1-Methylnaphthalene	Ave	0.5854	0.5704		9.74	10.0	-2.6	20.0
Hexachlorocyclopentadiene	Ave	0.3175	0.3349	0.0500	10.5	10.0	5.5	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.5370	0.0100	10.1	10.0	1.1	20.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3407	0.2000	10.3	10.0	3.2	20.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3656	0.2000	10.7	10.0	6.8	20.0
1,1'-Biphenyl	Ave	1.293	1.281	0.0100	9.90	10.0	-1.0	20.0
2-Chloronaphthalene	Ave	0.9841	0.9847	0.8000	10.0	10.0	0.0	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81701/2 Calibration Date: 04/12/2013 11:16

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3026	0.3238	0.0100	10.7	10.0	7.0	20.0
Dimethyl phthalate	Ave	1.118	1.116	0.0100	9.98	10.0	-0.2	20.0
1,3-Dinitrobenzene	Ave	0.1777	0.1924		10.8	10.0	8.3	20.0
2,6-Dinitrotoluene	Ave	0.2443	0.2605		10.7	10.0	6.6	20.0
Acenaphthylene	Ave	1.567	1.608	0.9000	10.3	10.0	2.6	20.0
3-Nitroaniline	Ave	0.2636	0.2862	0.0100	10.9	10.0	8.6	20.0
2,4-Dinitrophenol	Lin1		0.1671	0.0100	17.1	20.0	-14.7	20.0
Acenaphthene	Ave	1.089	1.046	0.9000	9.61	10.0	-3.9	20.0
4-Nitrophenol	Ave	0.1489	0.1506		20.2	20.0	1.1	20.0
2,4-Dinitrotoluene	Ave	0.3207	0.3365	0.2000	10.5	10.0	4.9	20.0
Dibenzofuran	Ave	1.468	1.501	0.8000	10.2	10.0	2.3	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2989	0.3021	0.0100	10.1	10.0	1.1	20.0
Diethyl phthalate	Ave	1.155	1.122	0.0100	9.72	10.0	-2.8	20.0
4-Chlorophenyl phenyl ether	Ave	0.6282	0.6236	0.4000	9.93	10.0	-0.7	20.0
4-Nitroaniline	Ave	0.2737	0.2912	0.0100	10.6	10.0	6.4	20.0
Fluorene	Ave	1.193	1.199	0.9000	10.0	10.0	0.5	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1211	0.0100	17.9	20.0	-10.3	20.0
N-Nitrosodiphenylamine	Ave	0.4728	0.4570	0.0100	19.3	20.0	-3.3	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.6357	0.6277		9.87	10.0	-1.3	20.0
Azobenzene	Ave	0.6357	0.6281		9.88	10.0	-1.2	20.0
4-Bromophenyl phenyl ether	Ave	0.1784	0.1711	0.1000	9.59	10.0	-4.1	20.0
Hexachlorobenzene	Ave	0.1808	0.1739	0.1000	9.62	10.0	-3.8	20.0
Atrazine	Ave	0.1794	0.1755	0.0100	19.6	20.0	-2.1	20.0
Pentachlorophenol	Ave	0.1168	0.1176	0.0500	20.1	20.0	0.7	20.0
Phenanthrene	Ave	0.9275	0.8806	0.7000	9.49	10.0	-5.1	20.0
Anthracene	Ave	0.9222	0.9069	0.7000	9.83	10.0	-1.7	20.0
Carbazole	Ave	0.8498	0.7974	0.0100	9.38	10.0	-6.2	20.0
Di-n-butyl phthalate	Ave	1.040	0.997	0.0100	9.59	10.0	-4.1	20.0
Fluoranthene	Ave	1.094	1.052	0.6000	9.62	10.0	-3.8	20.0
Benzidine	Ave	0.4158	0.3646		17.5	20.0	-12.3	20.0
Pyrene	Ave	1.033	1.014	0.6000	9.82	10.0	-1.8	20.0
Butyl benzyl phthalate	Ave	0.3936	0.3928	0.0100	9.98	10.0	-0.2	20.0
3,3'-Dichlorobenzidine	Ave	0.3264	0.3207	0.0100	19.7	20.0	-1.7	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.5537	0.5656	0.0100	10.2	10.0	2.2	20.0
Benzo[a]anthracene	Ave	0.995	0.9390	0.8000	9.43	10.0	-5.7	20.0
Chrysene	Ave	0.9135	0.9032	0.7000	9.89	10.0	-1.1	20.0
Di-n-octyl phthalate	Lin1		1.147	0.0100	9.28	10.0	-7.2	20.0
Benzo[b]fluoranthene	Ave	1.074	1.028	0.7000	9.58	10.0	-4.2	20.0
Benzo[k]fluoranthene	Ave	1.168	1.241	0.7000	10.6	10.0	6.3	20.0
Benzo[a]pyrene	Ave	0.997	1.055	0.7000	10.6	10.0	5.8	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81701/2 Calibration Date: 04/12/2013 11:16

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	1.093	1.111	0.5000	10.2	10.0	1.6	20.0
Dibenz(a,h)anthracene	Ave	0.9115	0.9167	0.4000	10.1	10.0	0.6	20.0
Benzo[g,h,i]perylene	Ave	0.9331	0.9477	0.5000	10.2	10.0	1.6	20.0
2-Fluorophenol (Surr)	Ave	1.157	1.145		9.89	10.0	-1.1	20.0
Phenol-d5 (Surr)	Ave	1.542	1.500		9.73	10.0	-2.7	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3740	0.3537		9.46	10.0	-5.4	20.0
2-Fluorobiphenyl (Surr)	Ave	1.290	1.262		9.78	10.0	-2.2	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1463	0.1359		9.29	10.0	-7.1	20.0
Terphenyl-d14 (Surr)	Ave	0.7870	0.7158		9.10	10.0	-9.0	20.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/15/2013 08:54

Analysis Batch Number: 81924 End Date: 04/15/2013 10:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-81924/1		04/15/2013 08:54	1	30415001.D	DB-624 0.18(mm)
CCVIS 240-81924/2		04/15/2013 09:13	1	30415002.D	DB-624 0.18(mm)
240-22680-2	MRC-MW14B-040113	04/15/2013 10:48	10	30415032.D	DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: 30415001.D DFTPP Injection Date: 04/15/2013

Instrument ID: A4HP10 DFTPP Injection Time: 08:54

Analysis Batch No.: 81924

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	44.1	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	48.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.1	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.0	
441	Present, but less than mass 443	9.3	
442	40.0 - 110.0% of mass 198	47.3	
443	15.0 - 24.0% of mass 442	9.9	(20.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81924/2	30415002.D	04/15/2013	09:13
MRC-MW14B-040113	240-22680-2	30415032.D	04/15/2013	10:48

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81924/2 Calibration Date: 04/15/2013 09:13

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30415002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5173		8.75	10.0	-12.5	20.0
N-Nitrosodimethylamine	Ave	0.6668	0.7201		10.8	10.0	8.0	20.0
Pyridine	Ave	1.237	1.291		10.4	10.0	4.4	20.0
Benzaldehyde	Ave	1.088	1.054	0.0100	19.4	20.0	-3.1	20.0
Phenol	Ave	1.517	1.499	0.8000	9.88	10.0	-1.2	20.0
Aniline	Ave	1.869	1.874		10.0	10.0	0.3	20.0
Bis(2-chloroethyl)ether	Ave	1.174	1.157	0.7000	9.85	10.0	-1.5	20.0
2-Chlorophenol	Ave	1.223	1.196	0.8000	9.78	10.0	-2.2	20.0
1,3-Dichlorobenzene	Ave	1.322	1.321		9.99	10.0	-0.1	20.0
1,4-Dichlorobenzene	Ave	1.349	1.349		10.0	10.0	0.0	20.0
Benzyl alcohol	Ave	0.7768	0.7579		9.76	10.0	-2.4	20.0
1,2-Dichlorobenzene	Ave	1.287	1.262		9.80	10.0	-2.0	20.0
2-Methylphenol	Ave	1.105	1.118	0.7000	10.1	10.0	1.2	20.0
bis (2-chloroisopropyl) ether	Ave	1.795	1.805		10.1	10.0	0.6	20.0
Indene	Ave	2.278	2.210		19.4	20.0	-3.0	20.0
3 & 4 Methylphenol	Ave	1.151	1.155		10.0	10.0	0.3	20.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.8116	0.5000	9.85	10.0	-1.5	20.0
Acetophenone	Ave	1.716	1.670	0.0100	9.73	10.0	-2.7	20.0
Hexachloroethane	Ave	0.5215	0.4995	0.3000	9.58	10.0	-4.2	20.0
Nitrobenzene	Ave	0.3401	0.3380	0.2000	9.94	10.0	-0.6	20.0
Isophorone	Ave	0.6103	0.5867	0.4000	9.61	10.0	-3.9	20.0
2-Nitrophenol	Ave	0.1624	0.1552	0.1000	9.56	10.0	-4.4	20.0
2,4-Dimethylphenol	Ave	0.3114	0.2991	0.2000	9.60	10.0	-4.0	20.0
Benzoic acid	Lin		0.1684		17.3	20.0	-13.3	20.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3604	0.3000	10.0	10.0	0.3	20.0
2,4-Dichlorophenol	Ave	0.2560	0.2535	0.2000	9.90	10.0	-1.0	20.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.2970		9.91	10.0	-0.9	20.0
Naphthalene	Ave	0.9279	0.8851	0.7000	9.54	10.0	-4.6	20.0
4-Chloroaniline	Ave	0.3867	0.3856	0.0100	9.97	10.0	-0.3	20.0
Hexachlorobutadiene	Ave	0.1834	0.1820	0.0100	9.92	10.0	-0.8	20.0
Caprolactam	Ave	0.0877	0.0867	0.0100	19.8	20.0	-1.2	20.0
4-Chloro-3-methylphenol	Ave	0.2736	0.2583	0.2000	9.44	10.0	-5.6	20.0
2-Methylnaphthalene	Ave	0.6242	0.5967	0.4000	9.56	10.0	-4.4	20.0
1-Methylnaphthalene	Ave	0.5854	0.5533		9.45	10.0	-5.5	20.0
Hexachlorocyclopentadiene	Ave	0.3175	0.3268	0.0500	10.3	10.0	2.9	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.5163	0.0100	9.72	10.0	-2.8	20.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3244	0.2000	9.83	10.0	-1.7	20.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3367	0.2000	9.84	10.0	-1.6	20.0
1,1'-Biphenyl	Ave	1.293	1.223	0.0100	9.46	10.0	-5.4	20.0
2-Chloronaphthalene	Ave	0.9841	0.9475	0.8000	9.63	10.0	-3.7	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81924/2 Calibration Date: 04/15/2013 09:13

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30415002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3026	0.2896	0.0100	9.57	10.0	-4.3	20.0
Dimethyl phthalate	Ave	1.118	1.075	0.0100	9.62	10.0	-3.8	20.0
1,3-Dinitrobenzene	Ave	0.1777	0.1830		10.3	10.0	3.0	20.0
2,6-Dinitrotoluene	Ave	0.2443	0.2533		10.4	10.0	3.7	20.0
Acenaphthylene	Ave	1.567	1.544	0.9000	9.85	10.0	-1.5	20.0
3-Nitroaniline	Ave	0.2636	0.2724	0.0100	10.3	10.0	3.3	20.0
Acenaphthene	Ave	1.089	1.021	0.9000	9.38	10.0	-6.2	20.0
2,4-Dinitrophenol	Lin1		0.1678	0.0100	17.1	20.0	-14.4	20.0
4-Nitrophenol	Ave	0.1489	0.1462		19.6	20.0	-1.8	20.0
2,4-Dinitrotoluene	Ave	0.3207	0.3291	0.2000	10.3	10.0	2.6	20.0
Dibenzofuran	Ave	1.468	1.445	0.8000	9.84	10.0	-1.6	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2989	0.2948	0.0100	9.86	10.0	-1.4	20.0
Diethyl phthalate	Ave	1.155	1.084	0.0100	9.39	10.0	-6.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.6282	0.6147	0.4000	9.79	10.0	-2.1	20.0
4-Nitroaniline	Ave	0.2737	0.2834	0.0100	10.4	10.0	3.5	20.0
Fluorene	Ave	1.193	1.203	0.9000	10.1	10.0	0.8	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1203	0.0100	17.8	20.0	-10.9	20.0
N-Nitrosodiphenylamine	Ave	0.4728	0.4501	0.0100	19.0	20.0	-4.8	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.6357	0.6073		9.55	10.0	-4.5	20.0
Azobenzene	Ave	0.6357	0.6080		9.56	10.0	-4.4	20.0
4-Bromophenyl phenyl ether	Ave	0.1784	0.1691	0.1000	9.48	10.0	-5.2	20.0
Hexachlorobenzene	Ave	0.1808	0.1733	0.1000	9.59	10.0	-4.1	20.0
Atrazine	Ave	0.1794	0.1700	0.0100	19.0	20.0	-5.2	20.0
Pentachlorophenol	Ave	0.1168	0.1151	0.0500	19.7	20.0	-1.5	20.0
Phenanthrene	Ave	0.9275	0.8790	0.7000	9.48	10.0	-5.2	20.0
Anthracene	Ave	0.9222	0.8892	0.7000	9.64	10.0	-3.6	20.0
Carbazole	Ave	0.8498	0.7762	0.0100	9.13	10.0	-8.7	20.0
Di-n-butyl phthalate	Ave	1.040	0.9551	0.0100	9.19	10.0	-8.1	20.0
Fluoranthene	Ave	1.094	1.060	0.6000	9.69	10.0	-3.1	20.0
Benzidine	Ave	0.4158	0.3512		16.9	20.0	-15.5	20.0
Pyrene	Ave	1.033	1.040	0.6000	10.1	10.0	0.7	20.0
Butyl benzyl phthalate	Ave	0.3936	0.3816	0.0100	9.70	10.0	-3.0	20.0
3,3'-Dichlorobenzidine	Ave	0.3264	0.3191	0.0100	19.6	20.0	-2.2	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.5537	0.5328	0.0100	9.62	10.0	-3.8	20.0
Benzo[a]anthracene	Ave	0.995	0.9429	0.8000	9.47	10.0	-5.3	20.0
Chrysene	Ave	0.9135	0.9182	0.7000	10.1	10.0	0.5	20.0
Di-n-octyl phthalate	Lin1		1.054	0.0100	8.56	10.0	-14.4	20.0
Benzo[b]fluoranthene	Ave	1.074	1.093	0.7000	10.2	10.0	1.8	20.0
Benzo[k]fluoranthene	Ave	1.168	1.287	0.7000	11.0	10.0	10.3	20.0
Benzo[a]pyrene	Ave	0.997	1.045	0.7000	10.5	10.0	4.9	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVIS 240-81924/2 Calibration Date: 04/15/2013 09:13

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30415002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	1.093	1.131	0.5000	10.3	10.0	3.5	20.0
Dibenz(a,h)anthracene	Ave	0.9115	0.9033	0.4000	9.91	10.0	-0.9	20.0
Benzo[g,h,i]perylene	Ave	0.9331	0.9748	0.5000	10.4	10.0	4.5	20.0
2-Fluorophenol (Surr)	Ave	1.157	1.139		9.85	10.0	-1.5	20.0
Phenol-d5 (Surr)	Ave	1.542	1.488		9.65	10.0	-3.5	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3740	0.3339		8.93	10.0	-10.7	20.0
2-Fluorobiphenyl (Surr)	Ave	1.290	1.228		9.52	10.0	-4.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1463	0.1428		9.76	10.0	-2.4	20.0
Terphenyl-d14 (Surr)	Ave	0.7870	0.7125		9.05	10.0	-9.5	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab File ID: 30410006.D Lab Sample ID: MB 240-80724/9-A

Matrix: Water Date Extracted: 04/05/2013 09:39

Instrument ID: A4HP10 Date Analyzed: 04/10/2013 11:16

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80724/10-A	30410007.D	04/10/2013 11:35
MRC-MW14A-040113	240-22680-3	30410026.D	04/10/2013 17:24
MRC-MW-69B-040113	240-22680-8	30410030.D	04/10/2013 18:38
MRC-MW-69A-040113	240-22680-7	30412031.D	04/12/2013 22:42
MRC-MW14B-040113	240-22680-2	30415032.D	04/15/2013 10:48

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22680-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80724/9-A

Matrix: Water | Lab File ID: 30410006.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/05/2013 09:39

Sample wt/vol: 1000(mL) | Date Analyzed: 04/10/2013 11:16

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81316 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	73		20-110
367-12-4	2-Fluorophenol (Surr)	60		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	67		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	68		21-110
4165-62-2	Phenol-d5 (Surr)	60		21-110
1718-51-0	Terphenyl-d14 (Surr)	85		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30410007.D

Lab ID: LCS 240-80724/10-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	8.81	44	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: STD6 240-80408/10 Date Analyzed: 04/03/2013 16:51

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30403010.D Heated Purge: (Y/N) N

Calibration ID: 14359

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		228376	3.58	887277	4.47	522154	5.74
UPPER LIMIT		456752	4.08	1774554	4.97	1044308	6.24
LOWER LIMIT		114188	3.08	443639	3.97	261077	5.24
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80408/11		228739	3.58	869350	4.47	541572	5.74
CCV 240-81316/2 CCVIS		161925	3.45	648569	4.34	398817	5.61

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: STD6 240-80408/10 Date Analyzed: 04/03/2013 16:51

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30403010.D Heated Purge: (Y/N) N

Calibration ID: 14359

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		917316	6.82	1057135	8.81	895560	10.30
UPPER LIMIT		1834632	7.32	2114270	9.31	1791120	10.80
LOWER LIMIT		458658	6.32	528568	8.31	447780	9.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80408/11		945207	6.82	1092368	8.80	916172	10.29
CCV 240-81316/2 CCVIS		728271	6.69	861904	8.66	734235	10.05

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCV 240-81316/2 Date Analyzed: 04/10/2013 10:01

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30410002.D Heated Purge: (Y/N) N

Calibration ID: 14363

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		161925	3.45	648569	4.34	398817	5.61
UPPER LIMIT		323850	3.95	1297138	4.84	797634	6.11
LOWER LIMIT		80963	2.95	324285	3.84	199409	5.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-80724/9-A		131780	3.45	525530	4.34	332382	5.60
LCS 240-80724/10-A		125751	3.45	459765	4.34	301607	5.60
240-22680-3	MRC-MW14A-040113	131268	3.45	518162	4.34	333908	5.60
240-22680-8	MRC-MW-69B-040113	141945	3.45	567411	4.34	371845	5.60

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCV 240-81316/2 Date Analyzed: 04/10/2013 10:01

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): 30410002.D Heated Purge: (Y/N) N

Calibration ID: 14363

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		728271	6.69	861904	8.66	734235	10.05
UPPER LIMIT		1456542	7.19	1723808	9.16	1468470	10.55
LOWER LIMIT		364136	6.19	430952	8.16	367118	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-80724/9-A		624725	6.68	716071	8.66	599890	10.05
LCS 240-80724/10-A		542947	6.69	654882	8.65	535249	10.04
240-22680-3	MRC-MW14A-040113	623301	6.68	733673	8.65	608556	10.04
240-22680-8	MRC-MW-69B-040113	694469	6.69	833941	8.65	698246	10.05

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		186412	5.95	710480	7.06	434356	8.57
UPPER LIMIT		372824	6.45	1420960	7.56	868712	9.07
LOWER LIMIT		93206	5.45	355240	6.56	217178	8.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		174408	5.95	682302	7.06	409364	8.57
CCVIS 240-81701/2		154520	5.95	589054	7.07	346386	8.57
CCVIS 240-81924/2		147434	5.94	574699	7.06	348604	8.56

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		809912	9.84	883495	12.45	695044	14.57
UPPER LIMIT		1619824	10.34	1766990	12.95	1390088	15.07
LOWER LIMIT		404956	9.34	441748	11.95	347522	14.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		751682	9.84	793717	12.45	637005	14.57
CCVIS 240-81701/2		674711	9.84	723342	12.45	566081	14.57
CCVIS 240-81924/2		663686	9.83	697994	12.44	521126	14.56

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVIS 240-81701/2 Date Analyzed: 04/12/2013 11:16

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30412002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		154520	5.95	589054	7.07	346386	8.57
UPPER LIMIT		309040	6.45	1178108	7.57	692772	9.07
LOWER LIMIT		77260	5.45	294527	6.57	173193	8.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22680-7	MRC-MW-69A-040113	196379	5.95	747829	7.07	465107	8.57

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVIS 240-81701/2 Date Analyzed: 04/12/2013 11:16

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): 30412002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		674711	9.84	723342	12.45	566081	14.57
UPPER LIMIT		1349422	10.34	1446684	12.95	1132162	15.07
LOWER LIMIT		337356	9.34	361671	11.95	283041	14.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22680-7	MRC-MW-69A-040113	875415	9.84	931539	12.45	689158	14.58

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVIS 240-81924/2 Date Analyzed: 04/15/2013 09:13

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30415002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		147434	5.94	574699	7.06	348604	8.56
UPPER LIMIT		294868	6.44	1149398	7.56	697208	9.06
LOWER LIMIT		73717	5.44	287350	6.56	174302	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22680-2	MRC-MW14B-040113	146550	5.94	557266	7.06	336625	8.56

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVIS 240-81924/2 Date Analyzed: 04/15/2013 09:13

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30415002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		663686	9.83	697994	12.44	521126	14.56
UPPER LIMIT		1327372	10.33	1395988	12.94	1042252	15.06
LOWER LIMIT		331843	9.33	348997	11.94	260563	14.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22680-2	MRC-MW14B-040113	615985	9.83	597551	12.43	464433	14.55

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Batch Number: 80724 Batch Start Date: 04/05/13 12:30 Batch Analyst: Coast, Chris

Batch Method: 3520C Batch End Date: 04/06/13 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	EXBNALCS1 00035	EXBNASURRW 00024
240-22680-M-2	MRC-MW14B-040113	3520C, 8270D	T	1020 mL	2 mL	7	2		1 mL
240-22680-F-3	MRC-MW14A-040113	3520C, 8270D	T	1010 mL	2 mL	7	2		1 mL
240-22680-F-7	MRC-MW-69A-040113	3520C, 8270D	T	1050 mL	2 mL	7	2		1 mL
240-22680-F-8	MRC-MW-69B-040113	3520C, 8270D	T	1000 mL	2 mL	7	2		1 mL
MB 240-80724/9		3520C, 8270D		1000 mL	2 mL	7	2		1 mL
LCS 240-80724/10		3520C, 8270D		1000 mL	2 mL	7	2	1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXRESTEKSPKW 00019
240-22680-M-2	MRC-MW14B-040113	3520C, 8270D	T	
240-22680-F-3	MRC-MW14A-040113	3520C, 8270D	T	
240-22680-F-7	MRC-MW-69A-040113	3520C, 8270D	T	
240-22680-F-8	MRC-MW-69B-040113	3520C, 8270D	T	
MB 240-80724/9		3520C, 8270D		
LCS 240-80724/10		3520C, 8270D		1 mL

Batch Notes	
Acid used for pH adjust Lot #	711898
Person's name who did the concentration	se/bm
Na2SO4 Lot Number	857424
Prep Solvent Lot #	921740

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE ID MRC-MW109B-040113

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST	IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	CONCENTRATION PPB
146550	10	301148	4	2000	0.5910	272.71
			Amt. inj	**Sample Volume (ML)**		
			1	1020		

1,4-Dioxane = 270 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\NCChrom\ChromData\A4HP10\20130415-18864.b\30415032.D		
Lims ID:	240-22680-M-2-A	Client ID:	MRC-MW14B-040113
Inject. Date:	15-Apr-2013 10:48:30	Dil. Factor:	10.0000
Sample Type:	Client		
Sample ID:	240-0018864-032		
Misc. Info.:	240-22680-M-2-A		
Operator:	001710	Instrument ID:	A4HP10
Injection Vol:	1.0 ul	ALS Bottle#:	32
Lims Batch ID:	81924	Lims Sample ID:	32
Detector:	MS SCAN		
Method:	\\NCChrom\ChromData\A4HP10\20130415-18864.b\8270_10.m		
Last Update:	15-Apr-2013 12:51:10	Calib Date:	12-Apr-2013 00:58:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCChrom\ChromData\A4HP10\20130411-18790.b\30411019.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK015		

First Level Reviewer: gruberj Date: 15-Apr-2013 12:48:21

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.940	5.940	0.0	97	146550	4.00	
* 2 Naphthalene-d8	136	7.056	7.056	0.0	100	557266	4.00	
* 3 Acenaphthene-d10	164	8.560	8.560	0.0	94	336625	4.00	
* 4 Phenanthrene-d10	188	9.829	9.829	0.0	98	615985	4.00	
* 5 Chrysene-d12	240	12.432	12.438	-0.006	84	597551	4.00	
* 6 Perylene-d12	264	14.553	14.559	-0.006	96	464433	4.00	
$ 7 2-Fluorophenol	112	4.694	4.694	0.0	88	41844	0.9869	
$ 8 Phenol-d5	99	5.576	5.575	0.001	98	61531	1.09	
$ 9 Nitrobenzene-d5	82	6.422	6.427	-0.005	88	31815	0.6106	
$ 10 2-Fluorobiphenyl (Surr)	172	7.967	7.973	-0.006	98	75891	0.6992	
$ 11 2,4,6-Tribromophenol	330	9.230	9.230	0.0	86	11814	0.9593	
$ 12 Terphenyl-d14	244	11.204	11.210	-0.006	95	69390	0.5902	
25 1,4-Dioxane	88	2.567	2.567	0.0	96	301148	13.9	M

QC Flag Legend

Review Flags
M - Manually Integrated

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW14B-040113	240-22680-2	96
	MB 240-80376/5	111
	LCS 240-80376/4	114

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22680-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Ave	38438 11934310	123659 81376315	406582 36666789	1209668 159521463	3969261	0.251 116	0.965 772	3.86 347	11.6 1543	38.6
Ethene	Ave	42640 18928943	178527 128474180	602389 57345534	1803144 247666290	6346457	0.440 203	1.69 1355	6.78 610	20.3 2710	67.8
Acetylene	Ave	10063 5189958	41670 40355973	142717 16648752	430060 77009812	1642953	0.408 188	1.57 1254	6.27 564	18.8 2508	62.7
Ethane	Ave	47848 22508675	203442 153167226	696560 68933291	2103657 300072325	7472670	0.472 218	1.81 1452	7.26 653	21.8 2903	72.6
Propene	Ave	52126 27266136	224438 185584124	758081 82393900	2265818 357727706	9132788	0.660 305	2.54 2030	10.2 914	30.5 4060	102
Propane	Ave	63821 34014805	279391 231733482	964752 104277738	2915538 454872922	11246033	0.691 319	2.66 2127	10.6 957	31.9 4253	106
Propane, 2-methyl	Ave	76200 45765053	333875 311308529	1215789 140338679	3674766 613077945	15084964	0.911 420	3.50 2802	14.0 1261	42.0 5604	140
1,1,1-Trifluoroethane	Ave	2054100 367330855	8954283	36585949 500284541	121933404	249161727	65.8 9114	253	1013 12152	3038	6076

Curve Type Legend:

Ave = Average

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII

GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: ZPID Start Date: 04/03/2013 12:53

Analysis Batch Number: 80376 End Date: 04/03/2013 15:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-80376/3		04/03/2013 12:53	1	Z0040303.D	
LCS 240-80376/4		04/03/2013 13:05	1	Z0040304.D	
MB 240-80376/5		04/03/2013 13:17	1	Z0040305.D	
ZZZZZ		04/03/2013 13:29	1		
ZZZZZ		04/03/2013 13:42	1		
ZZZZZ		04/03/2013 13:54	1		
ZZZZZ		04/03/2013 14:06	1		
ZZZZZ		04/03/2013 14:18	1		
ZZZZZ		04/03/2013 14:30	1		
ZZZZZ		04/03/2013 14:43	1		
ZZZZZ		04/03/2013 14:55	1		
ZZZZZ		04/03/2013 15:07	1		
ZZZZZ		04/03/2013 15:19	1		
ZZZZZ		04/03/2013 15:32	1		
ZZZZZ		04/03/2013 15:44	1		
240-22680-2	MRC-MW14B-040113	04/03/2013 15:56	1	Z0040318.D	

RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVRT 240-80376/3 Calibration Date: 04/03/2013 12:53

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040303.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	106572		110	116	-5.2	30.0
Ethene	Ave	94091	96269		208	203	2.3	30.0
Acetylene	Ave	27012	31302		218	188	15.9	30.0
Ethane	Ave	102982	103009		218	218	0.0	30.0
Propene	Ave	85073	85495		306	305	0.5	30.0
Propane	Ave	101861	100095		313	319	-1.7	30.0
Propane, 2-methyl	Ave	100175	98274		412	420	-1.9	30.0
1,1,1-Trifluoroethane	Ave	37902	42247		2710	2440	11.5	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVRT 240-80376/3 Calibration Date: 04/03/2013 12:53

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040303.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Sample No.: CCVRT 240-80376/3 Date Analyzed: 04/03/2013 12:53

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0040303.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.71		
UPPER LIMIT				2.76		
LOWER LIMIT				2.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-80376/3		04/03/2013 12:53	Z0040303.D	2.71		
LCS 240-80376/4		04/03/2013 13:05	Z0040304.D	2.70		
MB 240-80376/5		04/03/2013 13:17	Z0040305.D	2.70		
240-22680-2	MRC-MW14B-040113	04/03/2013 15:56	Z0040318.D	2.70		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: MB 240-80376/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0040305.D Lab File ID:(2)

Date Analyzed:(1) 04/03/2013 13:17 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-80376/4	04/03/2013 13:05	
MRC-MW14B-040113	240-22680-2	04/03/2013 15:56	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80376/5

Matrix: Water Lab File ID: Z0040305.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 04/03/2013 13:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80376 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.107	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	111		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040304.D

Lab ID: LCS 240-80376/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	219	108	64-130	
Ethane	218	229	105	77-127	
Methane	116	111	96	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

SDG 240-22680
SAMPLE ID MRC-MW14B-040113

SAMPLE CALC

INITIAL CF	DILUTION	COMPOUND OF INTEREST	Final Extract Volume (ML)	Initial Extract Volume (UL)	CONCENTRATION PPM
112419	1	3930905	1	1000	34.97

Methane = 35 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\ZPID\20130403-18498.b\Z0040318.D		
Lims ID:	240-22680-E-2	Client ID:	MRC-MW14B-040113
Inject. Date:	03-Apr-2013 15:56:32	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018498-018		
Misc. Info.:			
Operator:	402582	Instrument ID:	ZPID
Purge Vol:	1.000 mL	ALS Bottle#:	1
Lims Batch ID:	80376	Lims Sample ID:	18
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20130403-18498.b\RSK175.m		
Last Update:	03-Apr-2013 16:10:01	Calib Date:	18-Jan-2013 16:58:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Column Type:		Column Dia:	
Process Host:	XAWRK028		

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	0.910	0.909	0.001	3930905	35.0	
2 Ethylene						
2		1.409				
4 Ethane						
2		1.683				
$ 5 1,1,1-Trifluoroethane						
2	2.703	2.706	-0.003	95972501	2532.1	

6850

Perchlorate by LC/MS or LC/MS/MS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Instrument ID: A5 Start Date: 04/05/2013 19:16

Analysis Batch Number: 13757 End Date: 04/06/2013 09:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/05/2013 19:16	1		Anion HR 4.6(mm)
ICB 320-13757/2		04/05/2013 19:32	1	05APR13-perc-004.d	Anion HR 4.6(mm)
STD02 320-13757/3 IC		04/05/2013 19:49	1	05APR13-perc-005.d	Anion HR 4.6(mm)
STD03 320-13757/4 IC		04/05/2013 20:05	1	05APR13-perc-006.d	Anion HR 4.6(mm)
STD04 320-13757/5 ICISAV		04/05/2013 20:22	1	05APR13-perc-007.d	Anion HR 4.6(mm)
STD05 320-13757/6 IC		04/05/2013 20:38	1	05APR13-perc-008.d	Anion HR 4.6(mm)
STD06 320-13757/7 IC		04/05/2013 20:55	1	05APR13-perc-009.d	Anion HR 4.6(mm)
STD07 320-13757/8 IC		04/05/2013 21:11	1	05APR13-perc-010.d	Anion HR 4.6(mm)
STD08 320-13757/9 IC		04/05/2013 21:28	1	05APR13-perc-011.d	Anion HR 4.6(mm)
CCB 320-13757/10		04/05/2013 21:44	1	05APR13-perc-012.d	Anion HR 4.6(mm)
ICV 320-13757/11		04/05/2013 22:01	1	05APR13-perc-013.d	Anion HR 4.6(mm)
LODV 320-13757/12 CCV		04/05/2013 22:17	1	05APR13-perc-014.d	Anion HR 4.6(mm)
MB 320-13752/1-A		04/05/2013 22:34	1	05APR13-perc-015.d	Anion HR 4.6(mm)
LCS 320-13752/2-A		04/05/2013 22:50	1	05APR13-perc-016.d	Anion HR 4.6(mm)
INF 320-13752/3-A		04/05/2013 23:06	1	05APR13-perc-017.d	Anion HR 4.6(mm)
ZZZZZ		04/05/2013 23:23	1		Anion HR 4.6(mm)
ZZZZZ		04/05/2013 23:39	1		Anion HR 4.6(mm)
ZZZZZ		04/05/2013 23:56	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 00:12	1		Anion HR 4.6(mm)
720-48853-D-16-B MS		04/06/2013 00:29	1	05APR13-perc-022.d	Anion HR 4.6(mm)
720-48853-D-16-C MSD		04/06/2013 00:45	1	05APR13-perc-023.d	Anion HR 4.6(mm)
240-22680-6	MRC-MW-109B-040113	04/06/2013 01:02	1	05APR13-perc-024.d	Anion HR 4.6(mm)
240-22680-7	MRC-MW-69A-040113	04/06/2013 01:18	1	05APR13-perc-025.d	Anion HR 4.6(mm)
240-22680-8	MRC-MW-69B-040113	04/06/2013 01:35	1	05APR13-perc-026.d	Anion HR 4.6(mm)
ZZZZZ		04/06/2013 01:51	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 02:08	1		Anion HR 4.6(mm)
CCVL 320-13757/27		04/06/2013 02:24	1	05APR13-perc-029.d	Anion HR 4.6(mm)
CCV 320-13757/28		04/06/2013 02:40	1	05APR13-perc-030.d	Anion HR 4.6(mm)
CCB 320-13757/29		04/06/2013 02:57	1	05APR13-perc-031.d	Anion HR 4.6(mm)
ZZZZZ		04/06/2013 03:13	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 03:30	1		Anion HR 4.6(mm)
INF 320-13745/3-A		04/06/2013 03:46	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:03	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:19	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:36	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:52	1		Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Instrument ID: A5 Start Date: 04/05/2013 19:16

Analysis Batch Number: 13757 End Date: 04/06/2013 09:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/06/2013 05:09	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 05:25	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 05:42	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 05:58	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 06:14	1		Anion HR 4.6(mm)
CCV 320-13757/42		04/06/2013 06:31	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 06:47	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:04	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:20	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:37	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:53	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:10	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:26	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:43	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:59	1		Anion HR 4.6(mm)
CCVL 320-13757/52		04/06/2013 09:16	1		Anion HR 4.6(mm)
CCV 320-13757/53		04/06/2013 09:32	1		Anion HR 4.6(mm)
CCB 320-13757/54		04/06/2013 09:49	1		Anion HR 4.6(mm)

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1 Analy Batch No.: 13757

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/05/2013 19:49 Calibration End Date: 04/05/2013 21:28 Calibration ID: 2535

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD02 320-13757/3	05APR13-perc-005.d
Level 2	STD03 320-13757/4	05APR13-perc-006.d
Level 3	STD04 320-13757/5	05APR13-perc-007.d
Level 4	STD05 320-13757/6	05APR13-perc-008.d
Level 5	STD06 320-13757/7	05APR13-perc-009.d
Level 6	STD07 320-13757/8	05APR13-perc-010.d
Level 7	STD08 320-13757/9	05APR13-perc-011.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7922 0.8002	0.7876 0.8203	0.7562	0.7645	0.7738	Ave		0.7850				2.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1 Analy Batch No.: 13757

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/05/2013 19:49 Calibration End Date: 04/05/2013 21:28 Calibration ID: 2535

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD02 320-13757/3	05APR13-perc-005.d
Level 2	STD03 320-13757/4	05APR13-perc-006.d
Level 3	STD04 320-13757/5	05APR13-perc-007.d
Level 4	STD05 320-13757/6	05APR13-perc-008.d
Level 5	STD06 320-13757/7	05APR13-perc-009.d
Level 6	STD07 320-13757/8	05APR13-perc-010.d
Level 7	STD08 320-13757/9	05APR13-perc-011.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perchlorate	18OP	Ave	3786081 110231517	5877051 204193353	11608094	22978001	60281647	0.300 10.0	0.500 20.0	1.00	2.00	5.00

Curve Type Legend:
Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICV 320-13757/11 Calibration Date: 04/05/2013 22:01

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-013.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.7847		5.00	5.00	-0.0	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Lab Sample ID: LODV 320-13757/12 Calibration Date: 04/05/2013 22:17

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.8190		0.157	0.150	4.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCVL 320-13757/27 Calibration Date: 04/06/2013 02:24

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-029.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.7828		0.499	0.500	-0.3	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Lab Sample ID: CCV 320-13757/28 Calibration Date: 04/06/2013 02:40

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-030.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.7661		1.95	2.00	-2.4	15.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13757/10

Matrix: Water Lab File ID: 05APR13-perc-012.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/05/2013 21:44

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13757/29

Matrix: Water Lab File ID: 05APR13-perc-031.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/06/2013 02:57

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-13757/2

Matrix: Water Lab File ID: 05APR13-perc-004.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/05/2013 19:32

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: INF 320-13752/3-A

Matrix: Water Lab File ID: 05APR13-perc-017.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/05/2013 23:06

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	5.00		0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Lab File ID: 05APR13-perc-015.d Lab Sample ID: MB 320-13752/1-A

Matrix: Water Date Extracted: 04/05/2013 16:00

Instrument ID: A5 Date Analyzed: 04/05/2013 22:34

Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-13752/2-A	05APR13-perc-016.d	04/05/2013 22:50
	720-48853-D-16-B MS	05APR13-perc-022.d	04/06/2013 00:29
	720-48853-D-16-C MSD	05APR13-perc-023.d	04/06/2013 00:45
MRC-MW-109B-040113	240-22680-6	05APR13-perc-024.d	04/06/2013 01:02
MRC-MW-69A-040113	240-22680-7	05APR13-perc-025.d	04/06/2013 01:18
MRC-MW-69B-040113	240-22680-8	05APR13-perc-026.d	04/06/2013 01:35

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-13752/1-A

Matrix: Water Lab File ID: 05APR13-perc-015.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/05/2013 22:34

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-016.d

Lab ID: LCS 320-13752/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	4.78	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-022.d

Lab ID: 720-48853-D-16-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.50 U	5.11	102	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-023.d

Lab ID: 720-48853-D-16-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	5.01	100	2	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-017.d

Lab ID: INF 320-13752/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	5.00	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/05/2013 21:28

Calibration ID: 2535

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		147305654	10.00				
UPPER LIMIT		220958481	11.00				
LOWER LIMIT		73652827	9.00				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-13757/10		160995048	10.01				
ICV 320-13757/11		161301539	10.00				
LODV 320-13757/12 CCV		160709209	10.00				
MB 320-13752/1-A		152034932	10.00				
LCS 320-13752/2-A		147261694	10.00				
INF 320-13752/3-A		144775563	9.93				
720-48853-D-16-B MS		116473945	9.58				
720-48853-D-16-C MSD		119321160	9.55				
240-22680-6	MRC-MW-109B-040113	129150912	9.77				
240-22680-7	MRC-MW-69A-040113	126480442	9.97				
240-22680-8	MRC-MW-69B-040113	153485791	9.97				
CCVL 320-13757/27		161978952	9.98				
CCV 320-13757/28		162228127	9.98				
CCB 320-13757/29		151963734	10.00				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Batch Number: 13752 Batch Start Date: 04/05/13 16:00 Batch Analyst: Arauz, Horacio

Batch Method: Filtration Batch End Date: 04/05/13 17:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00021	LC6850SP 00010		
MB 320-13752/1		Filtration, 6850		4.00 mL	4.00 mL	40 uL			
LCS 320-13752/2		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
INF 320-13752/3		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
240-22680-D-6	MRC-MW-109B-040113	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
240-22680-D-7	MRC-MW-69A-040113	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
240-22680-D-8	MRC-MW-69B-040113	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
720-48853-D-16 MS		Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		
720-48853-D-16 MSD		Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		

Batch Notes	
Batch Comment	BA/AG/H Dionex l21227; Spiked: HA Witnessed: AH
Filter Lot #	.45um Millipore R2SA74748; .20um Millex R2AA50532; H2O 4-04-13; SMCS 4515-019B;

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE ID MRC-MW109B-040113

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST / IS AMOUNT (NG)	AVE RRF	CONCENTRATION PPB
129150912	1	3338675 / 10	0.7850	0.33

Perchlorate = 0.33 ug/L

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22680-1

SDG No.:

Client Sample ID: MRC-MW-109B-040113 Lab Sample ID: 240-22680-6

Matrix: Water Lab File ID: 05APR13-perc-024.d

Analysis Method: 6850 Date Collected: 04/01/2013 11:05

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/06/2013 01:02

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.33	J	0.50	0.082

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20130405-3725.b\05APR13-perc-024.d		
Lims ID:	240-22680-D-6-A	Client ID:	MRC-MW-109B-040113
Inject. Date:	06-Apr-2013 01:02:11	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:			
Misc. Info.:			
Operator:		Instrument ID:	A5
Injection Vol:	75.0 ul	ALS Bottle#:	0
Lims Batch ID:	13757	Lims Sample ID:	22
Detector:	MS QQQ		
Method:	\\Sacchrom\ChromData\A5\20130405-3725.b\6850_A5.m		
Last Update:	08-Apr-2013 11:24:22	Calib Date:	05-Apr-2013 21:28:14
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20130405-3725.b\05APR13-perc-011.d		
Limit Group:	LC 6850 ICAL		
Integrator:	Picker		
Column Type:		Column Dia:	
Process Host:	XAWRK019		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	9.765	9.996	-0.231		129150912	10.0		1954	
109.0 > 91.0	9.762	9.996	-0.234		40494362		3.19(2.30-3.80)	1966	
2 Perchlorate									
99.0 > 83.0	9.745	9.975	-0.230	0.998	3338675	0.3296		37.0	
101.0 > 85.0	9.809	9.975	-0.166	1.005	1023632		3.26(2.30-3.80)	38.3	

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG No.:

Project: MRC GW Sampling MD

Client Sample ID	Lab Sample ID
MRC-MW14B-040113	240-22680-2

Comments:

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22680-1

SDG No.:

Project: MRC GW Sampling MD

Client Sample ID	Lab Sample ID
MRC-MW14B-040113	240-22680-2
MRC-MW14A-040113	240-22680-3
MRC-MW107B/C-040113	240-22680-5
MRC-MW-109B-040113	240-22680-6
MRC-MW-69A-040113	240-22680-7

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-81543/4 04/11/2013 07:12				CCV 240-81543/18 04/11/2013 08:06				CCV 240-81543/30 04/11/2013 09:45			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25500		25000	102	51800		50000	104	52300		50000	105
Iron	12600		12500	101	24700		25000	99	25000		25000	100
Magnesium	24900		25000	100	50400		50000	101	51100		50000	102
Manganese	1510		1500	101	1910		2000	95	1930		2000	96
Potassium	24700		25000	99	49800		50000	100	50100		50000	100
Sodium	24900		25000	100	49900		50000	100	50200		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	CCV 240-81543/42 04/11/2013 10:32											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	52700		50000	105								
Iron	25100		25000	100								
Magnesium	51700		50000	103								
Manganese	1930		2000	96								
Potassium	50300		50000	101								
Sodium	50300		50000	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MTSiCCV_00001

Analyte	ICV 240-81543/4 04/11/2013 07:12				CCV 240-81543/20 04/11/2013 08:52				CCV 240-81543/29 04/11/2013 09:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	6920		6420	108	11100		10700	104	10900		10700	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MTSiCCV_00001

Analyte	CCV 240-81543/44 04/11/2013 10:39											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	10900		10700	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00349

Analyte	ICV 240-80949/7-A 04/09/2013 10:41				CCVL 240-80949/10-A 04/09/2013 10:45				CCV 240-80949/12-A 04/09/2013 13:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.41		2.50	96	5.02		5.00	100	5.17		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00349

Analyte	CCV 240-80949/12-A 04/09/2013 15:07				CCV 240-80949/12-A 04/09/2013 15:25							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.14		5.00	103	5.26		5.00	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	ICV 440-98883/7 04/16/2013 15:32				CCV 440-98883/36 04/16/2013 17:36				CCV 440-98883/48 04/16/2013 18:08			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.1		25.0	92	49.5		50.0	99	49.5		50.0	99
Arsenic	24.9		25.0	99	48.2		50.0	96	48.5		50.0	97
Barium	24.7		25.0	99	48.8		50.0	98	48.4		50.0	97
Beryllium	25.1		25.0	100	48.8		50.0	98	49.7		50.0	99
Cadmium	24.8		25.0	99	48.0		50.0	96	48.3		50.0	97
Chromium	23.7		25.0	95	49.4		50.0	99	49.5		50.0	99
Cobalt	25.9		25.0	104	50.6		50.0	101	50.4		50.0	101
Copper	24.5		25.0	98	46.8		50.0	94	46.4		50.0	93
Lead	23.1		25.0	92	49.3		50.0	99	47.2		50.0	94
Nickel	25.1		25.0	100	48.1		50.0	96	47.5		50.0	95
Selenium	25.5		25.0	102	50.2		50.0	100	49.4		50.0	99
Silver	23.4		25.0	93	49.2		50.0	98	49.3		50.0	99
Thallium	23.0		25.0	92	52.4		50.0	105	50.0		50.0	100
Vanadium	25.2		25.0	101	49.4		50.0	99	50.0		50.0	100
Zinc	24.3		25.0	97	48.6		50.0	97	48.9		50.0	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICV Source: MEICPMS4 ICV_00205 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00205

Analyte	CCV 440-98883/56 04/16/2013 18:30											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	46.3		50.0	93								
Arsenic	48.7		50.0	97								
Barium	48.1		50.0	96								
Beryllium	49.5		50.0	99								
Cadmium	47.9		50.0	96								
Chromium	48.8		50.0	98								
Cobalt	49.3		50.0	99								
Copper	46.5		50.0	93								
Lead	47.9		50.0	96								
Nickel	47.2		50.0	94								
Selenium	49.0		50.0	98								
Silver	48.6		50.0	97								
Thallium	50.2		50.0	100								
Vanadium	48.6		50.0	97								
Zinc	48.2		50.0	96								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-99022/6 04/17/2013 14:25				CCV 440-99022/13 04/17/2013 15:38				CCV 440-99022/25 04/17/2013 16:13			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Molybdenum	25.7		25.0	103	47.5		50.0	95	49.7		50.0	99
Antimony	23.4		25.0	94	45.3		50.0	91	48.1		50.0	96
Arsenic	25.5		25.0	102	48.5		50.0	97	48.1		50.0	96
Barium	25.5		25.0	102	48.5		50.0	97	46.9		50.0	94
Beryllium	25.3		25.0	101	49.1		50.0	98	45.2		50.0	90
Cadmium	25.3		25.0	101	48.2		50.0	96	48.0		50.0	96
Chromium	24.3		25.0	97	50.4		50.0	101	47.9		50.0	96
Cobalt	23.8		25.0	95	49.4		50.0	99	46.4		50.0	93
Copper	25.8		25.0	103	49.0		50.0	98	45.6		50.0	91
Lead	23.6		25.0	95	47.6		50.0	95	44.8		50.0	90
Nickel	25.9		25.0	104	48.7		50.0	97	46.5		50.0	93
Selenium	25.1		25.0	100	49.5		50.0	99	47.7		50.0	95
Silver	23.6		25.0	94	48.3		50.0	97	49.0		50.0	98
Thallium	23.6		25.0	94	49.6		50.0	99	48.0		50.0	96
Vanadium	25.6		25.0	102	50.5		50.0	101	48.4		50.0	97
Zinc	25.7		25.0	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	CCV 440-99022/32 04/17/2013 16:32											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Molybdenum	49.5		50.0	99								
Antimony	47.2		50.0	94								
Arsenic	48.8		50.0	98								
Barium	47.9		50.0	96								
Beryllium	45.3		50.0	91								
Cadmium	48.0		50.0	96								
Chromium	48.4		50.0	97								
Cobalt	47.1		50.0	94								
Copper	46.7		50.0	93								
Lead	46.7		50.0	93								
Nickel	47.1		50.0	94								
Selenium	47.9		50.0	96								
Silver	49.5		50.0	99								
Thallium	49.0		50.0	98								
Vanadium	48.2		50.0	96								
Zinc	55.1		50.0	110								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	ICV 440-98228/1-A 04/15/2013 13:00				CCV 440-98228/3-A 04/15/2013 14:30				CCV 440-98228/3-A 04/15/2013 16:53			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.19		8.00	102	4.10		4.00	102	4.24		4.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	CCV 440-98228/3-A 04/15/2013 17:21											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.26		4.00	106								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-81543/23 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5100		102	70-130
Iron	200	201		101	70-130
Potassium	5000	4790	J	96	70-130
Magnesium	5000	5120		102	70-130
Manganese	15.0	14.7	J	98	70-130
Sodium	5000	4970	J	99	70-130

Lab Sample ID: CRI 240-81543/38 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1150		107	70-130

Lab Sample ID: CRI 240-81543/39 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5160		103	70-130
Iron	200	203		101	70-130
Potassium	5000	4860	J	97	70-130
Magnesium	5000	5220		104	70-130
Manganese	15.0	14.7	J	98	70-130
Sodium	5000	5020		100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Method: 7470A Instrument ID: H1

Lab Sample ID: CRA 240-80949/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00349

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.186	J	93	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-98883/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00015

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.85	J	92	50-150
Arsenic	2.00	2.04		102	50-150
Beryllium	1.00	0.996		100	50-150
Cadmium	1.00	1.07		107	50-150
Barium	2.00	2.13		106	50-150
Chromium	2.00	1.93	J	96	50-150
Copper	2.00	1.91	J	95	50-150
Nickel	2.00	2.18		109	50-150
Lead	2.00	1.87		94	50-150
Selenium	2.00	2.04		102	50-150
Cobalt	1.00	0.965	J	97	50-150
Silver	2.00	1.85		93	50-150
Thallium	2.00	1.87		94	50-150
Zinc	10.0	9.51	J	95	50-150
Vanadium	4.00	3.73		93	50-150

Lab Sample ID: CRI 440-99022/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	0.966	J	97	50-150
Arsenic	1.00	1.16		116	50-150
Beryllium	0.500	0.526		105	50-150
Cadmium	0.500	0.522	J	104	50-150
Barium	1.00	1.03		103	50-150
Chromium	1.00	0.985	J	99	50-150
Copper	1.00	1.01	J	101	50-150
Nickel	1.00	0.996	J	100	50-150
Lead	1.00	0.921	J	92	50-150
Selenium	1.00	1.08	J	108	50-150
Cobalt	0.500	0.485	J	97	50-150
Silver	1.00	0.835	J	84	50-150
Thallium	1.00	0.897	J	90	50-150
Zinc	5.00	5.87	J	117	50-150
Molybdenum	1.00	0.941	J	94	50-150

No action

No action

Only Mo was reported from samples associated with this CRI

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-99022/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	2.00	1.86	J	93	50-150

Lab Sample ID: CRI 440-99022/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.81	J	90	50-150
Arsenic	2.00	2.10		105	50-150
Beryllium	1.00	1.02		102	50-150
Cadmium	1.00	0.979	J	98	50-150
Barium	2.00	1.99		99	50-150
Chromium	2.00	1.92	J	96	50-150
Copper	2.00	1.88	J	94	50-150
Nickel	2.00	2.10		105	50-150
Lead	2.00	1.84		92	50-150
Selenium	2.00	2.12		106	50-150
Cobalt	1.00	0.917	J	92	50-150
Silver	2.00	1.75		87	50-150
Thallium	2.00	1.82		91	50-150
Zinc	10.0	9.07	J	91	50-150
Molybdenum	2.00	1.86	J	93	50-150
Vanadium	4.00	3.67		92	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-98228/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.225		113	50-150

Lab Sample ID: CRA 440-98228/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.201		101	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-81543/5 04/11/2013 07:15		CCB 240-81543/19 04/11/2013 08:10		CCB 240-81543/21 04/11/2013 08:56		CCB 240-81543/31 04/11/2013 09:49	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U			5000	U
Iron	200	200	U	200	U			200	U
Magnesium	5000	5000	U	5000	U			5000	U
Manganese	15	15	U	15	U			15	U
Potassium	5000	5000	U	5000	U			5000	U
SiO2, Silica	1100	1100	U			1100	U	1100	U
Sodium	5000	5000	U	5000	U			5000	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-81543/43 04/11/2013 10:35		CCB 240-81543/45 04/11/2013 10:46					
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U						
Iron	200	200	U						
Magnesium	5000	5000	U						
Manganese	15	15	U						
Potassium	5000	5000	U						
SiO2, Silica	1100			1100	U				
Sodium	5000	5000	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80949/8-A 04/09/2013 10:42		CCB 240-80949/11-A 04/09/2013 13:24		CCB 240-80949/11-A 04/09/2013 15:08		CCB 240-80949/11-A 04/09/2013 15:27	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-98883/8 04/16/2013 15:35		CCB 440-98883/37 04/16/2013 17:38		CCB 440-98883/50 04/16/2013 18:13		CCB 440-98883/57 04/16/2013 18:33	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.251	J	0.244	J	1.0	U	0.260	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99022/7 04/17/2013 14:28		CCB 440-99022/14 04/17/2013 15:42		CCB 440-99022/27 04/17/2013 16:18		CCB 440-99022/33 04/17/2013 16:35	
		Found	C	Found	C	Found	C	Found	C
Molybdenum	2.0	2.0	U	0.234	J	2.0	U	2.0	U
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.223	J	1.0	U	1.0	U	0.208	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Mo only

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-98228/2-A 04/15/2013 13:02		CCB 440-98228/4-A 04/15/2013 14:33		CCB 440-98228/4-A 04/15/2013 16:56		CCB 440-98228/4-A 04/15/2013 17:24	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-81088/1-A

Instrument Code: I9 Batch No.: 81543

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	206	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	43.0	J		6010C
7439-96-5	Manganese	0.631	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

FORM III-IN

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-81101/1-A

Instrument Code: H1 Batch No.: 81255

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98511/1-A

Instrument Code: ICPMS4 Batch No.: 98883

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98511/1-A

Instrument Code: ICPMS4 Batch No.: 99022

CAS No.	Analyte	Concentration	C	Q	Method
7439-98-7	Molybdenum	10	U		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98288/1-A

Instrument Code: CV-HG3 Batch No.: 98406

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICSA 240-81543/8 Instrument ID: I9

Lab File ID: I9041113A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True	Found	
	Solution A	Solution A	Percent Recovery
Calcium	**500000**	**488130**	**98**
Iron	**200000**	**189670**	**95**
Magnesium	**500000**	**503100**	**101**
Manganese		**2.84**	
Potassium		**-83.2**	
Sodium		**45.5**	
Aluminum	*500000*	*517120*	*103*
Antimony		*-2.48*	
Arsenic		*-1.91*	
Barium		*0.0885*	
Beryllium		*-0.458*	
Boron		*1.25*	
Cadmium		*1.10*	
Chromium		*2.91*	
Cobalt		*-1.63*	
Copper		*0.359*	
Lead		*-0.411*	
Lithium		*-45.9*	
Molybdenum		*-2.04*	
Nickel		*-0.271*	
Selenium		*3.14*	
Silicon		*-20.3*	
Silver		*0.106*	
Strontium		*7.14*	
Thallium		*-0.113*	
Tin		*7.39*	
Titanium		*-0.641*	
Vanadium		*-2.55*	
Zinc		*10.1*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICSAB 240-81543/9 Instrument ID: I9

Lab File ID: I9041113A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Calcium	**500000**	**479310**	**96**
Iron	**200000**	**187750**	**94**
Magnesium	**500000**	**496570**	**99**
Manganese	**500**	**483**	**97**
Potassium	**10000**	**10110**	**101**
Sodium	**10000**	**10296**	**103**
Aluminum	*500000*	*507590*	*102*
Antimony	*1000*	*996*	*100*
Arsenic	*1000*	*1008*	*101*
Barium	*500*	*491*	*98*
Beryllium	*500*	*493*	*99*
Boron	*500*	*504*	*101*
Cadmium	*1000*	*1002*	*100*
Chromium	*500*	*474*	*95*
Cobalt	*500*	*479*	*96*
Copper	*500*	*515*	*103*
Lead	*1000*	*894*	*89*
Lithium	*500*	*476*	*95*
Molybdenum	*1000*	*966*	*97*
Nickel	*1000*	*952*	*95*
Selenium	*1000*	*1006*	*101*
Silicon	*10000*	*9807*	*98*
Silver	*1000*	*1074*	*107*
Strontium	*1500*	*1441*	*96*
Thallium	*1000*	*938*	*94*
Tin	*500*	*512*	*102*
Titanium	*500*	*508*	*102*
Vanadium	*500*	*484*	*97*
Zinc	*1000*	*971*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICSA 440-98883/11 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00201

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.290**	
Arsenic		**0.0040**	
Barium		**0.248**	
Beryllium		**0.0090**	
Cadmium		**0.0740**	
Chromium		**1.43**	
Cobalt		**0.0770**	
Copper		**1.32**	
Lead		**0.114**	
Nickel		**1.19**	
Selenium		**-0.186**	
Silver		**0.130**	
Thallium		**0.0190**	
Vanadium		**0.221**	
Zinc		**4.19**	
Aluminum	*100000*	*97283*	*97*
Calcium	*100000*	*104693*	*105*
Cerium		*0.0400*	
Iron	*100000*	*103577*	*104*
Magnesium	*100000*	*100384*	*100*
Manganese		*0.232*	
Potassium	*100000*	*103857*	*104*
Sodium	*100000*	*101361*	*101*
Tin		*0.187*	
Uranium		*0.0290*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICSAB 440-98883/12 Instrument ID: ICPMS4

Lab File ID: 012ICSB.D ICS Source: MEICPMS4 ICSB_00201

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.5**	**102**
Arsenic	**20.0**	**20.7**	**104**
Barium	**20.0**	**22.2**	**111**
Beryllium	**20.0**	**21.7**	**108**
Cadmium	**20.0**	**20.7**	**103**
Chromium	**20.0**	**19.8**	**99**
Cobalt	**20.0**	**18.7**	**93**
Copper	**20.0**	**19.3**	**97**
Lead	**20.0**	**18.1**	**90**
Nickel	**20.0**	**19.9**	**99**
Selenium	**20.0**	**20.4**	**102**
Silver	**20.0**	**18.8**	**94**
Thallium	**20.0**	**17.9**	**90**
Vanadium	**20.0**	**18.5**	**92**
Zinc	**20.0**	**21.8**	**109**
Aluminum	*100000*	*91810*	*92*
Calcium	*101000*	*99802*	*99*
Cerium	*20.0*	*22.3*	*111*
Iron	*100000*	*100161*	*100*
Magnesium	*101000*	*94289*	*94*
Manganese	*20.0*	*19.1*	*96*
Potassium	*101000*	*99296*	*99*
Sodium	*101000*	*96038*	*96*
Sr	*20.0*	*27.8*	*139*
Tin	*20.0*	*20.7*	*103*
Uranium	*20.0*	*20.7*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICSA 440-99022/10 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Molybdenum	**2000**	**2189**	**109**
Aluminum	*100000*	*87153*	*87*
Antimony		*0.264*	
Arsenic		*0.0580*	
Barium		*0.196*	
Beryllium		*0.0010*	
Cadmium		*0.0900*	
Calcium	*100000*	*90075*	*90*
Cerium		*0.0280*	
Chromium		*1.28*	
Cobalt		*0.0580*	
Copper		*0.555*	
Iron	*100000*	*90322*	*90*
Lead		*0.0930*	
Magnesium	*100000*	*90166*	*90*
Manganese		*0.0040*	
Nickel		*0.760*	
Potassium	*100000*	*90582*	*91*
Selenium		*0.144*	
Silver		*0.0950*	
Sodium	*100000*	*90781*	*91*
Sr		*4.38*	
Thallium		*0.0010*	
Tin		*-0.0470*	
Uranium		*-0.0050*	
Vanadium		*0.0600*	
Zinc		*1.26*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Lab Sample ID: ICSAB 440-99022/11 Instrument ID: ICPMS4

Lab File ID: 012ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Molybdenum	**2020**	**2339**	**116**
Aluminum	*100000*	*93316*	*93*
Antimony	*20.0*	*20.2*	*101*
Arsenic	*20.0*	*20.7*	*103*
Barium	*20.0*	*21.4*	*107*
Beryllium	*20.0*	*22.1*	*110*
Cadmium	*20.0*	*20.1*	*100*
Calcium	*101000*	*98543*	*98*
Cerium	*20.0*	*21.5*	*107*
Chromium	*20.0*	*20.0*	*100*
Cobalt	*20.0*	*17.9*	*90*
Copper	*20.0*	*19.3*	*97*
Iron	*100000*	*97193*	*97*
Lead	*20.0*	*17.9*	*90*
Magnesium	*101000*	*95234*	*95*
Manganese	*20.0*	*18.6*	*93*
Nickel	*20.0*	*19.5*	*98*
Potassium	*101000*	*97583*	*97*
Selenium	*20.0*	*20.4*	*102*
Silver	*20.0*	*18.3*	*92*
Sodium	*101000*	*96036*	*96*
Sr	*20.0*	*27.1*	*136*
Thallium	*20.0*	*17.9*	*89*
Tin	*20.0*	*19.9*	*100*
Uranium	*20.0*	*19.1*	*95*
Vanadium	*20.0*	*18.8*	*94*
Zinc	*20.0*	*21.1*	*106*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22732-I-7-B MS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	160000		110000		50000	98	75-125		6010C
Iron	4330		3400		1000	97	75-125		6010C
Potassium	52400		2800	J	50000	99	75-125		6010C
Magnesium	50700		1400	J	50000	99	75-125		6010C
Manganese	677		190		500	97	75-125		6010C
Sodium	150000		100000		50000	96	75-125		6010C
SiO2, Silica	8160		5700		2140	116	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22732-I-7-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	156000		50000	90	75-125	3	20		6010C
Iron	4300		1000	93	75-125	1	20		6010C
Potassium	52200		50000	99	75-125	0	20		6010C
Magnesium	50600		50000	98	75-125	0	20		6010C
Manganese	664		500	95	75-125	2	20		6010C
Sodium	145000		50000	85	75-125	4	20		6010C
SiO2, Silica	8030		2140	110	75-125	2	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22693-E-2-B MS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.09		0.20	U	1.00	109	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22693-E-2-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.06		1.00	106	69-134	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW14B-040113 MS
Lab ID: 240-22680-2 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22680-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	76.4		4.0	U	80.0	95	75-125		6020
Arsenic	77.8		10	U	80.0	97	75-125		6020
Beryllium	84.9		0.40	J	80.0	106	75-125		6020
Cadmium	84.0		2.0	U	80.0	105	75-125		6020
Barium	217		130		80.0	109	75-125		6020
Chromium	86.8		4.0	U	80.0	108	75-125		6020
Copper	84.4		3.5	J	80.0	101	75-125		6020
Nickel	216		130		80.0	101	75-125		6020
Lead	85.2		2.0		80.0	104	75-125		6020
Selenium	80.8		10	U	80.0	101	75-125		6020
Cobalt	161		77		80.0	105	75-125		6020
Silver	85.5		0.58	J	80.0	106	75-125		6020
Thallium	87.1		4.0	U	80.0	109	75-125		6020
Zinc	253		180		80.0	95	75-125		6020
Molybdenum	60.4		0.79	J	80.0	75	75-125		6020
Vanadium	89.4		3.9	J	80.0	107	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW14B-040113 MSD | Lab ID: 240-22680-2 MSD

Lab Name: TestAmerica Irvine | Job No.: 240-22680-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	83.8		80.0	105	75-125	9	20		6020
Arsenic	84.4		80.0	105	75-125	8	20		6020
Beryllium	92.9		80.0	116	75-125	9	20		6020
Cadmium	91.1		80.0	114	75-125	8	20		6020
Barium	237		80.0	134	75-125	9	20	F	6020
Chromium	95.1		80.0	119	75-125	9	20		6020
Copper	92.8		80.0	112	75-125	9	20		6020
Nickel	241		80.0	133	75-125	11	20	F	6020
Lead	95.8		80.0	117	75-125	12	20		6020
Selenium	85.7		80.0	107	75-125	6	20		6020
Cobalt	171		80.0	118	75-125	6	20		6020
Silver	93.6		80.0	116	75-125	9	20		6020
Thallium	96.8		80.0	121	75-125	11	20		6020
Zinc	277		80.0	126	75-125	9	20	F	6020
Molybdenum	56.6		80.0	70	75-125	7	20	F	6020
Vanadium	98.0		80.0	118	75-125	9	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW107B/C-040113 MS
Lab ID: 240-22680-5 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22680-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.51		0.20	U	8.00	106	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW107B/C-040113 MSD Lab ID: 240-22680-5 MSD

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.96		8.00	112	70-130	5	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW14B-040113 PDS | Lab ID: 240-22680-2 PDS

Lab Name: TestAmerica Irvine | Job No.: 240-22680-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	77.7		4.0	U	80.0	97	75-125		6020
Arsenic	80.9		10	U	80.0	101	75-125		6020
Beryllium	80.6		0.40	J	80.0	100	75-125		6020
Cadmium	79.7		2.0	U	80.0	100	75-125		6020
Barium	210		130		80.0	100	75-125		6020
Chromium	81.5		4.0	U	80.0	102	75-125		6020
Copper	79.5		3.5	J	80.0	95	75-125		6020
Nickel	201		130		80.0	83	75-125		6020
Lead	84.1		2.0		80.0	103	75-125		6020
Selenium	81.6		10	U	80.0	102	75-125		6020
Cobalt	151		77		80.0	92	75-125		6020
Silver	80.7		0.58	J	80.0	100	75-125		6020
Thallium	85.1		4.0	U	80.0	106	75-125		6020
Zinc	247		180		80.0	88	75-125		6020
Molybdenum	76.0		0.79	J	80.0	94	75-125		6020
Vanadium	85.1		3.9	J	80.0	101	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-81088/2-A

Lab Name: TestAmerica Canton Job No.: 240-22680-1

Sample Matrix: Water LCS Source: MTICP2A_00025

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	49900		100	80	120		6010C
Iron	1000	984		98	80	120		6010C
Potassium	50000	47800		96	80	120		6010C
Magnesium	50000	48700		97	80	120		6010C
Manganese	500	470		94	80	120		6010C
Sodium	50000	48000		96	80	120		6010C
SiO2, Silica	2140	2250		105	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-81101/2-A

Lab Name: TestAmerica Canton Job No.: 240-22680-1

Sample Matrix: Water LCS Source: MTHGCALW_00350

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.08		102	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-98511/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	88.6		111	80	120		6020
Arsenic	80.0	84.0		105	80	120		6020
Beryllium	80.0	84.5		106	80	120		6020
Cadmium	80.0	86.0		107	80	120		6020
Barium	80.0	87.2		109	80	120		6020
Chromium	80.0	86.2		108	80	120		6020
Copper	80.0	93.1		116	80	120		6020
Nickel	80.0	84.0		105	80	120		6020
Lead	80.0	88.0		110	80	120		6020
Selenium	80.0	85.9		107	80	120		6020
Cobalt	80.0	87.9		110	80	120		6020
Silver	80.0	87.0		109	80	120		6020
Thallium	80.0	88.4		111	80	120		6020
Zinc	80.0	87.3		109	80	120		6020
Vanadium	80.0	84.9		106	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-98511/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Molybdenum	80.0	75.5		94	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-98288/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00077

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.55		107	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22732-I-7-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-22680-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	110000		111000		0.19		6010C
Iron	3400		3360		NC		6010C
Potassium	2800	J	2360	J	NC		6010C
Magnesium	1400	J	1430	J	NC		6010C
Manganese	190		193		0.53		6010C
Sodium	100000		102000		0.01		6010C
SiO2, Silica	5700		5400		4.9		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 440-43699-B-3-B SD ^10

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22680-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	4.0	U	20	U	NC		6020
Arsenic	7.2	J	50	U	NC		6020
Beryllium	2.0	U	10	U	NC		6020
Cadmium	2.0	U	10	U	NC		6020
Barium	81		67.4		17		6020
Chromium	4.0	U	20	U	NC		6020
Copper	37		31.0		NC		6020
Nickel	1.9	J	20	U	NC		6020
Lead	0.65	J	10	U	NC		6020
Selenium	5.0	J	50	U	NC		6020
Cobalt	0.40	J	10	U	NC		6020
Silver	2.0	U	10	U	NC		6020
Thallium	4.0	U	20	U	NC		6020
Zinc	14	J	200	U	NC		6020
Molybdenum	70		66.1	J	5.5		6020
Vanadium	3.8	J	200	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22680-1

SDG No.:

Instrument ID: I9 Date: 04/04/2013 11:44

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22680-1

SDG No.:

Instrument ID: H1 Date: 04/01/2011 10:45

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

FORM XI - IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22680-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-81088/1-A	04/09/2013 08:09	81088		50	50
LCS 240-81088/2-A	04/09/2013 08:09	81088		50	50
240-22732-I-7-B MS	04/09/2013 08:09	81088		50	50
240-22732-I-7-C MSD	04/09/2013 08:09	81088		50	50
240-22680-2	04/09/2013 08:09	81088		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-81101/1-A	04/09/2013 12:20	81101		100	100
LCS 240-81101/2-A	04/09/2013 12:20	81101		100	100
240-22693-E-2-B MS	04/09/2013 12:20	81101		100	100
240-22693-E-2-C MSD	04/09/2013 12:20	81101		100	100
240-22680-2	04/09/2013 12:20	81101		100	100

FORM XII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98511/1-A	04/16/2013 10:26	98511		50	50
LCS 440-98511/2-A	04/16/2013 10:26	98511		50	50
240-22680-2	04/16/2013 10:26	98511		50	50
240-22680-2 MS	04/16/2013 10:26	98511		50	50
240-22680-2 MSD	04/16/2013 10:26	98511		50	50
240-22680-3	04/16/2013 10:26	98511		50	50
240-22680-5	04/16/2013 10:26	98511		50	50
240-22680-6	04/16/2013 10:26	98511		50	50
240-22680-7	04/16/2013 10:26	98511		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98288/1-A	04/15/2013 13:37	98288		20	20
LCS 440-98288/2-A	04/15/2013 13:37	98288		20	20
240-22680-5	04/15/2013 13:37	98288		20	20
240-22680-5 MS	04/15/2013 13:37	98288		20	20
240-22680-5 MSD	04/15/2013 13:37	98288		20	20
240-22680-3	04/15/2013 13:37	98288		20	20
240-22680-6	04/15/2013 13:37	98288		20	20
240-22680-7	04/15/2013 13:37	98288		20	20

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			10:28																													
CCV 240-81543/42	1		10:32	X	X	X	X	X	X																							
CCB 240-81543/43	1		10:35	X	X	X	X	X	X																							
CCV 240-81543/44	1		10:39							X																						
CCB 240-81543/45	1		10:46							X																						
ZZZZZZ			10:50																													
ZZZZZZ			10:54																													
ZZZZZZ			10:58																													
ZZZZZZ			11:01																													
ZZZZZZ			11:05																													
ZZZZZZ			11:09																													
EMPTY 240-81543/52			11:14																													
CCV 240-81543/53			11:21																													
CCV 240-81543/54			11:25																													
CCB 240-81543/55			11:29																													
ZZZZZZ			11:33																													
ZZZZZZ			11:37																													
ZZZZZZ			11:41																													
ZZZZZZ			11:45																													
ZZZZZZ			11:55																													
ZZZZZZ			11:59																													
ZZZZZZ			12:03																													
ZZZZZZ			12:07																													
ZZZZZZ			12:11																													
ZZZZZZ			12:15																													
CCV 240-81543/66			12:19																													
CCB 240-81543/67			12:23																													
ZZZZZZ			12:27																													
ZZZZZZ			12:31																													
ZZZZZZ			12:35																													
ZZZZZZ			12:39																													
ZZZZZZ			12:43																													
ZZZZZZ			12:47																													
ZZZZZZ			12:51																													
ZZZZZZ			12:55																													
ZZZZZZ			12:59																													
ZZZZZZ			13:03																													
CCV 240-81543/78			13:08																													
CCB 240-81543/79			13:11																													
ZZZZZZ			13:15																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ca	Fe	K	Mg	Mn	Na	SiO2																				
ZZZZZZ			13:19																											
ZZZZZZ			13:23																											
ZZZZZZ			13:27																											
ZZZZZZ			13:31																											
ZZZZZZ			13:35																											
ZZZZZZ			13:39																											
ZZZZZZ			13:43																											
ZZZZZZ			13:46																											
ZZZZZZ			13:50																											
CCV 240-81543/90			13:54																											
CCB 240-81543/91			13:58																											
ZZZZZZ			14:02																											
ZZZZZZ			14:06																											
ZZZZZZ			14:09																											
ZZZZZZ			14:13																											
ZZZZZZ			14:17																											
ZZZZZZ			14:21																											
ZZZZZZ			14:25																											
ZZZZZZ			14:30																											
ZZZZZZ			14:34																											
ZZZZZZ			14:38																											
CCV 240-81543/102			14:42																											
CCB 240-81543/103			14:46																											
ZZZZZZ			14:50																											
ZZZZZZ			14:54																											
ZZZZZZ			14:58																											
ZZZZZZ			15:03																											
ZZZZZZ			15:07																											
ZZZZZZ			15:11																											
ZZZZZZ			15:15																											
ZZZZZZ			15:19																											
ZZZZZZ			15:23																											
ZZZZZZ			15:26																											
CCV 240-81543/114			15:30																											
CCB 240-81543/115			15:34																											
ZZZZZZ			16:17																											
ZZZZZZ			16:20																											
ZZZZZZ			16:24																											
ZZZZZZ			16:29																											
ZZZZZZ			16:33																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			16:38																													
ZZZZZZ			16:42																													
ZZZZZZ			16:46																													
ZZZZZZ			16:50																													
ZZZZZZ			16:55																													
CCV 240-81543/126			16:59																													
CCB 240-81543/127			17:02																													
ZZZZZZ			17:06																													
ZZZZZZ			17:10																													
ZZZZZZ			17:14																													
ZZZZZZ			17:18																													
ZZZZZZ			17:22																													
ZZZZZZ			17:26																													
ZZZZZZ			17:30																													
ZZZZZZ			17:34																													
ZZZZZZ			17:38																													
ZZZZZZ			17:42																													
CCV 240-81543/138			17:47																													
CCB 240-81543/139			17:51																													
ZZZZZZ			17:54																													
ZZZZZZ			17:58																													
ZZZZZZ			18:02																													
ZZZZZZ			18:06																													
ZZZZZZ			18:10																													
ZZZZZZ			18:14																													
ZZZZZZ			18:18																													
ZZZZZZ			18:22																													
ZZZZZZ			18:26																													
ZZZZZZ			18:29																													
CCV 240-81543/150			18:33																													
CCB 240-81543/151			18:37																													
ZZZZZZ			18:41																													
ZZZZZZ			18:45																													
ZZZZZZ			18:49																													
ZZZZZZ			18:53																													
ZZZZZZ			18:56																													
ZZZZZZ			19:00																													
ZZZZZZ			19:04																													
ZZZZZZ			19:08																													
ZZZZZZ			19:12																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			19:16																													
CCV 240-81543/162			19:20																													
CCB 240-81543/163			19:23																													
ZZZZZZ			19:27																													
ZZZZZZ			19:31																													
ZZZZZZ			19:35																													
ZZZZZZ			19:39																													
ZZZZZZ			19:43																													
ZZZZZZ			19:47																													
ZZZZZZ			19:51																													
ZZZZZZ			19:55																													
ZZZZZZ			19:58																													
ZZZZZZ			20:02																													
CCV 240-81543/174			20:06																													
CCB 240-81543/175			20:10																													
ZZZZZZ			20:14																													
ZZZZZZ			20:18																													
ZZZZZZ			20:22																													
ZZZZZZ			20:25																													
ZZZZZZ			20:29																													
ZZZZZZ			20:33																													
ZZZZZZ			20:37																													
ZZZZZZ			20:41																													
ZZZZZZ			20:45																													
ZZZZZZ			20:49																													
CCV 240-81543/186			20:53																													
CCB 240-81543/187			20:57																													
ZZZZZZ			21:01																													
ZZZZZZ			21:05																													
ZZZZZZ			21:08																													
ZZZZZZ			21:12																													
ZZZZZZ			21:16																													
ZZZZZZ			21:20																													
ZZZZZZ			21:24																													
ZZZZZZ			21:28																													
ZZZZZZ			21:32																													
ZZZZZZ			21:37																													
CCV 240-81543/198			21:42																													
CCB 240-81543/199			21:45																													
ZZZZZZ			21:49																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			21:54																													
ZZZZZZ			21:58																													
ZZZZZZ			22:03																													
ZZZZZZ			22:07																													
ZZZZZZ			22:11																													
ZZZZZZ			22:15																													
ZZZZZZ			22:19																													
ZZZZZZ			22:23																													
CCV 240-81543/209			22:27																													
CCB 240-81543/210			22:30																													

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/09/2013 10:31 End Date: 04/09/2013 15:43

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-80949/1-A			10:31	X
IC 240-80949/2-A			10:34	X
IC 240-80949/3-A			10:35	X
IC 240-80949/4-A			10:37	X
IC 240-80949/5-A			10:38	X
IC 240-80949/6-A			10:40	X
ICV 240-80949/7-A	1		10:41	X
ICB 240-80949/8-A	1		10:42	X
CRA 240-80949/9-A	1		10:44	X
CCVL 240-80949/10-A	1		10:45	X
CCB 240-80949/11-A			10:47	
ZZZZZZ			10:48	
ZZZZZZ			10:49	
ZZZZZZ			10:51	
ZZZZZZ			10:53	
ZZZZZZ			10:55	
ZZZZZZ			10:57	
ZZZZZZ			10:58	
ZZZZZZ			10:59	
ZZZZZZ			11:01	
ZZZZZZ			11:02	
CCV 240-80949/12-A			11:03	
CCB 240-80949/11-A			11:05	
ZZZZZZ			11:06	
ZZZZZZ			11:08	
ZZZZZZ			11:10	
ZZZZZZ			11:12	
ZZZZZZ			11:13	
ZZZZZZ			11:14	
ZZZZZZ			11:16	
ZZZZZZ			11:18	
ZZZZZZ			11:20	
ZZZZZZ			11:21	
CCV 240-80949/12-A			11:23	
CCB 240-80949/11-A			11:24	
ZZZZZZ			11:26	
ZZZZZZ			11:27	
ZZZZZZ			11:29	
ZZZZZZ			11:30	
ZZZZZZ			11:31	
ZZZZZZ			11:33	
ZZZZZZ			11:34	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/09/2013 10:31 End Date: 04/09/2013 15:43

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			11:36	
ZZZZZZ			11:37	
ZZZZZZ			11:39	
CCV 240-80949/12-A			11:40	
CCB 240-80949/11-A			11:41	
ZZZZZZ			11:43	
ZZZZZZ			11:44	
ZZZZZZ			11:46	
ZZZZZZ			11:48	
ZZZZZZ			11:49	
ZZZZZZ			11:50	
ZZZZZZ			11:52	
ZZZZZZ			11:53	
ZZZZZZ			11:55	
ZZZZZZ			11:57	
CCV 240-80949/12-A			11:58	
CCB 240-80949/11-A			12:00	
ZZZZZZ			12:01	
ZZZZZZ			12:04	
ZZZZZZ			12:06	
ZZZZZZ			12:08	
ZZZZZZ			12:10	
ZZZZZZ			12:12	
ZZZZZZ			12:13	
ZZZZZZ			12:14	
ZZZZZZ			12:16	
CCV 240-80949/12-A			12:17	
CCB 240-80949/11-A			12:19	
CCV 240-80949/12-A			12:53	
CCB 240-80949/11-A			12:55	
ZZZZZZ			12:57	
ZZZZZZ			12:58	
ZZZZZZ			13:00	
ZZZZZZ			13:01	
ZZZZZZ			13:03	
ZZZZZZ			13:04	
ZZZZZZ			13:06	
ZZZZZZ			13:07	
ZZZZZZ			13:09	
ZZZZZZ			13:10	
CCV 240-80949/12-A			13:12	
CCB 240-80949/11-A			13:14	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/09/2013 10:31 End Date: 04/09/2013 15:43

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			13:15	
ZZZZZZ			13:16	
CRA 240-80949/9-A			13:21	
CCV 240-80949/12-A	1		13:22	X
CCB 240-80949/11-A	1		13:24	X
MB 240-81101/1-A	1	T	14:57	X
LCS 240-81101/2-A	1	T	14:59	X
ZZZZZZ			15:01	
240-22693-E-2-B MS	1	T	15:02	X
240-22693-E-2-C MSD	1	T	15:04	X
ZZZZZZ			15:05	
CCV 240-80949/12-A	1		15:07	X
CCB 240-80949/11-A	1		15:08	X
240-22680-2	1	T	15:10	X
ZZZZZZ			15:12	
ZZZZZZ			15:13	
ZZZZZZ			15:15	
ZZZZZZ			15:16	
ZZZZZZ			15:17	
ZZZZZZ			15:19	
ZZZZZZ			15:20	
ZZZZZZ			15:22	
ZZZZZZ			15:24	
CCV 240-80949/12-A	1		15:25	X
CCB 240-80949/11-A	1		15:27	X
ZZZZZZ			15:28	
ZZZZZZ			15:30	
ZZZZZZ			15:31	
ZZZZZZ			15:33	
ZZZZZZ			15:35	
ZZZZZZ			15:36	
ZZZZZZ			15:38	
ZZZZZZ			15:39	
CCV 240-80949/12-A			15:41	
CCB 240-80949/11-A			15:43	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/16/2013 15:16 End Date: 04/16/2013 18:33

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/16/2013 15:16 End Date: 04/16/2013 18:33

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Ni	Pb	Sb	Se	Tl	V	Zn										
240-22680-2 PDS	2	R	17:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-22680-3	1	R	17:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-22680-5	1	R	18:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-22680-6	1	R	18:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-22680-7	1	R	18:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCV 440-98883/48	1		18:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ZZZZZZ			18:11																								
CCB 440-98883/50	1		18:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ZZZZZZ			18:16																								
ZZZZZZ			18:19																								
ZZZZZZ			18:22																								
ZZZZZZ			18:25																								
440-43699-B-3-B SD ^10	10	R	18:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCV 440-98883/56	1		18:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 440-98883/57	1		18:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/17/2013 14:11 End Date: 04/17/2013 16:35

Lab Sample Id	D/F	Type	Time	Analytes
				Mo
STD0 440-99022/1 IC	1		14:11	X
STD1 440-99022/2 IC	1		14:14	X
STD2 440-99022/3 IC	1		14:17	X
STD3 440-99022/4 IC	1		14:20	X
STD4 440-99022/5 IC	1		14:22	X
ICV 440-99022/6	1		14:25	X
ICB 440-99022/7	1		14:28	X
CRI 440-99022/8	1		14:30	X
CRI 440-99022/9	1		14:33	X
ICSA 440-99022/10	1		14:36	X
ICSAB 440-99022/11	1		14:39	X
RINSE 440-99022/12			14:41	
CCV 440-99022/13	1		15:38	X
CCB 440-99022/14	1		15:42	X
MB 440-98511/1-A	1	R	15:45	X
LCS 440-98511/2-A	1	R	15:47	X
240-22680-2	2	R	15:50	X
240-22680-2 MS	2	R	15:53	X
240-22680-2 MSD	2	R	15:55	X
240-22680-2 PDS	2	R	15:59	X
240-22680-3	1	R	16:02	X
240-22680-5	1	R	16:05	X
240-22680-6	1	R	16:08	X
240-22680-7	1	R	16:10	X
CCV 440-99022/25	1		16:13	X
ZZZZZZ			16:16	
CCB 440-99022/27	1		16:18	X
ZZZZZZ			16:21	
ZZZZZZ			16:24	
ZZZZZZ			16:27	
440-43699-B-3-B SD ^10	10	R	16:29	X
CCV 440-99022/32	1		16:32	X
CCB 440-99022/33	1		16:35	X

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/15/2013 12:45 End Date: 04/15/2013 17:54

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-98228/6-A	1		12:45	X
IC 440-98228/7-A	1		12:48	X
IC 440-98228/8-A	1		12:50	X
IC 440-98228/9-A	1		12:53	X
IC 440-98228/10-A	1		12:55	X
IC 440-98228/11-A	1		12:58	X
ICV 440-98228/1-A	1		13:00	X
ICB 440-98228/2-A	1		13:02	X
CRA 440-98228/5-A			13:05	
CCV 440-98228/3-A			13:25	
CCB 440-98228/4-A			13:27	
CCV 440-98228/3-A			13:52	
CCB 440-98228/4-A			13:55	
CCV 440-98228/3-A			14:15	
CCB 440-98228/4-A			14:17	
CCV 440-98228/3-A	1		14:30	X
CCB 440-98228/4-A	1		14:33	X
CRA 440-98228/5-A	1		14:35	X
ZZZZZZ			16:31	
ZZZZZZ			16:33	
ZZZZZZ			16:36	
ZZZZZZ			16:38	
ZZZZZZ			16:41	
MB 440-98288/1-A	1	T	16:43	X
LCS 440-98288/2-A	1	T	16:46	X
240-22680-5	1	T	16:48	X
240-22680-5 MS	1	T	16:51	X
CCV 440-98228/3-A	1		16:53	X
CCB 440-98228/4-A	1		16:56	X
240-22680-5 MSD	1	T	16:58	X
240-22680-3	1	T	17:01	X
240-22680-6	1	T	17:04	X
240-22680-7	1	T	17:06	X
ZZZZZZ			17:09	
ZZZZZZ			17:11	
ZZZZZZ			17:14	
ZZZZZZ			17:16	
ZZZZZZ			17:19	
CCV 440-98228/3-A	1		17:21	X
CCB 440-98228/4-A	1		17:24	X
ZZZZZZ			17:26	
ZZZZZZ			17:29	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/15/2013 12:45 End Date: 04/15/2013 17:54

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			17:31	
ZZZZZZ			17:34	
ZZZZZZ			17:36	
ZZZZZZ			17:39	
ZZZZZZ			17:41	
ZZZZZZ			17:44	
CCV 440-98228/3-A			17:47	
CCB 440-98228/4-A			17:49	
ZZZZZZ			17:52	
CRA 440-98228/5-A	1		17:54	X

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/16/2013 End Date: 04/16/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD4 440-98883/6 IC	15:30	98		99		98		98		99	
ICV 440-98883/7	15:32	99		101		101		102		102	
ICB 440-98883/8	15:35	98		99		98		98		99	
CRI 440-98883/10	15:40	98		101		99		98		99	
ICSA 440-98883/11	15:43	78		94		91		87		91	
ICSAB 440-98883/12	15:46	78		96		93		89		96	
CCV 440-98883/36	17:36	92		95		93		99		103	
CCB 440-98883/37	17:38	89		90		89		93		98	
MB 440-98511/1-A	17:41	95		96		95		100		104	
LCS 440-98511/2-A	17:44	87		89		88		91		97	
240-22680-2	17:46	89		95		93		97		104	
240-22680-2 MS	17:49	86		93		93		97		105	
240-22680-2 MSD	17:52	83		93		93		96		102	
240-22680-2 PDS	17:54	82		95		92		96		103	
240-22680-3	17:57	80		93		89		94		104	
240-22680-5	18:00	85		93		92		97		103	
240-22680-6	18:03	80		93		89		92		100	
240-22680-7	18:05	71		93		84		84		89	
CCV 440-98883/48	18:08	92		103		99		102		104	
CCB 440-98883/50	18:13	90		97		93		97		101	
440-43699-B-3-B SD	18:27	90		94		93		96		100	
CCV 440-98883/56	18:30	88		95		92		96		100	
CCB 440-98883/57	18:33	87		90		89		91		97	

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Irvine Job No.: 240-22680-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/17/2013 End Date: 04/17/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-99022/1 IC	14:11	100		100		100		100		100	
STD1 440-99022/2 IC	14:14	99		102		101		100		102	
STD2 440-99022/3 IC	14:17	97		99		100		100		101	
STD3 440-99022/4 IC	14:20	95		98		100		99		99	
STD4 440-99022/5 IC	14:22	95		97		98		98		99	
ICV 440-99022/6	14:25	96		98		99		100		100	
ICB 440-99022/7	14:28	95		98		98		97		99	
CRI 440-99022/8	14:30	95		98		100		100		101	
CRI 440-99022/9	14:33	95		99		100		101		100	
ICSA 440-99022/10	14:36	82		99		94		90		93	
ICSAB 440-99022/11	14:39	77		96		94		90		92	
CCV 440-99022/13	15:38	88		95		97		99		100	
CCB 440-99022/14	15:42	89		95		97		98		99	
MB 440-98511/1-A	15:45	89		97		97		99		100	
LCS 440-98511/2-A	15:47	90		96		98		99		102	
240-22680-2	15:50	87		98		98		99		102	
240-22680-2 MS	15:53	85		95		97		97		100	
240-22680-2 MSD	15:55	86		96		98		98		100	
240-22680-2 PDS	15:59	87		98		98		98		101	
240-22680-3	16:02	90		100		98		97		100	
240-22680-5	16:05	99		102		102		101		102	
240-22680-6	16:08	107		109		103		99		102	
240-22680-7	16:10	102		117		99		88		86	
CCV 440-99022/25	16:13							111		106	
CCB 440-99022/27	16:18					114		107		105	
440-43699-B-3-B SD	16:29					114		108		107	
CCV 440-99022/32	16:32			119		112		106		105	
CCB 440-99022/33	16:35			117		110		104		104	

MRC-MW14B-040113

$Mn = 2,100$ ug/L

Sample Name: 240-22680-I-2-A Acquired: 4/11/2013 10:01:10 Type: Unk
Method: Standard Method + IEC Checks(v129) Mode: CONC Corr. Factor: 1.000000
User: Roger Method: 6010B/6010C Method: 200.7 :
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.31981	1255.7	1.2755	32.626	106.57	.41101	19100.	.0513
Stddev	.30175	3.2	1.3347	.121	.22	.05730	21.	.0920
%RSD	94.352	.25228	104.64	.37189	.20754	13.942	.10989	179.5
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	58.116	4.0405	3.8056	37169.	3787.6	9.3673	8131.6	2136.9
Stddev	.143	.1200	.5139	32.	41.0	2.0745	7.2	3.2
%RSD	.24621	2.9698	13.504	.08734	1.0815	22.147	.08852	.15040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.58145	42775.	111.85	1.9917	2.350	-.73167	1.4076	34.745
Stddev	.07318	80.	.29	1.3083	1.003	2.5820	.4396	.221
%RSD	12.585	.18720	.26177	65.687	42.68	352.89	31.229	.63471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

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GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG No.:

Project: MRC GW Sampling MD

Client Sample ID	Lab Sample ID
MRC-MW14B-040113	240-22680-2
MRC-MW14B-040113	240-22680-2 RA

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Analyst: LG Batch Start Date: 04/02/2013

Reporting Units: mg/L Analytical Batch No.: 80325

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	23:33	Chloride	45.2	50.0	90	90-110		WCICCCV_00257
2	CCB	23:49	Chloride	1.0				U	
9	CCV	01:44	Chloride	45.8	50.0	92	90-110		WCICCCV_00257
10	CCB	02:01	Chloride	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Analyst: LG Batch Start Date: 04/02/2013

Reporting Units: mg/L Analytical Batch No.: 80326

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	23:33	Nitrite as N	2.15	2.50	86	90-110		WCICCCV_00257
			Nitrate as N	2.24	2.50	90	90-110		WCICCCV_00257
			Orthophosphate as P	2.36	2.50	94	90-110		WCICCCV_00257
2	CCB	23:49	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
9	CCV	01:44	Nitrite as N	2.17	2.50	87	90-110		WCICCCV_00257
			Nitrate as N	2.29	2.50	92	90-110		WCICCCV_00257
			Orthophosphate as P	2.50	2.50	100	90-110		WCICCCV_00257
10	CCB	02:01	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Analyst: AM Batch Start Date: 04/03/2013

Reporting Units: mg/L Analytical Batch No.: 80404

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	11:11	Chloride	47.6	50.0	95	90-110		WCICCCV_00257
			Sulfate	46.2	50.0	92	90-110		WCICCCV_00257
4	CCB	11:27	Chloride	1.0				U	
			Sulfate	1.0				U	
15	CCV	14:28	Chloride	47.6	50.0	95	90-110		WCICCCV_00257
			Sulfate	46.1	50.0	92	90-110		WCICCCV_00257
16	CCB	14:44	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Analyst: AM Batch Start Date: 04/03/2013

Reporting Units: mg/L Analytical Batch No.: 80405

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	11:11	Nitrite as N	2.35	2.50	94	90-110		WCICCCV_00257
			Nitrate as N	2.37	2.50	95	90-110		WCICCCV_00257
			Orthophosphate as P	2.54	2.50	101	90-110		WCICCCV_00257
4	CCB	11:27	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
15	CCV	14:28	Nitrite as N	2.35	2.50	94	90-110		WCICCCV_00257
			Nitrate as N	2.38	2.50	95	90-110		WCICCCV_00257
			Orthophosphate as P	2.71	2.50	109	90-110		WCICCCV_00257
16	CCB	14:44	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Analyst: JB Batch Start Date: 04/05/2013

Reporting Units: mg/L Analytical Batch No.: 80845

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	11:57	Ammonia (as N)	9.50	8.93	106	90-110		WCSIMP192-505_00001
6	ICB	12:16	Ammonia (as N)	0.0368				J	
17	CCV	15:33	Ammonia (as N)	2.48	2.50	99	90-110		WCNH31000_00021
18	CCB	15:52	Ammonia (as N)	0.20				U	
25	CCV	16:47	Ammonia (as N)	2.74	2.50	110	90-110		WCNH31000_00021
26	CCB	17:12	Ammonia (as N)	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Analyst: TH Batch Start Date: 04/12/2013

Reporting Units: mg/L Analytical Batch No.: 81866

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:22	Dissolved Organic Carbon	26.3	25.0	105	90-110		WC TOC CCV_00128
2	CCB	11:33	Dissolved Organic Carbon	1.0				U	
11	CCV	15:43	Dissolved Organic Carbon	26.8	25.0	107	90-110		WC TOC CCV_00128
12	CCB	15:54	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 80402	Date: 04/03/2013 10:45						
160.1	MB 240-80402/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID: 80325	Date: 04/03/2013 00:06						
300.0	MB 240-80325/3	Chloride	1.0	U	mg/L	1.0	1
Batch ID: 80326	Date: 04/03/2013 00:06						
300.0	MB 240-80326/3	Nitrite as N	0.10	U ^	mg/L	0.10	1
300.0	MB 240-80326/3	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80326/3	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID: 80404	Date: 04/03/2013 11:44						
300.0	MB 240-80404/5	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-80404/5	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 80405	Date: 04/03/2013 11:44						
300.0	MB 240-80405/5	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80405/5	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80405/5	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID: 81000	Date: 04/05/2013 17:26						
310.1	MB 240-81000/3	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID: 80845	Date: 04/05/2013 12:22						
350.3	MB 240-80845/7	Ammonia (as N)	0.20	U	mg/L	0.20	1
Batch ID: 81866	Date: 04/12/2013 11:44						
9060	MB 240-81866/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80325	Date: 04/03/2013 00:55										
300.0	240-22669-I-1	Chloride	4.2		mg/L						
300.0	240-22669-I-1 MS	Chloride	56.1		mg/L	50.0	104	80-120			
Batch ID: 80326	Date: 04/03/2013 00:55										
300.0	240-22669-I-1	Nitrite as N	0.10	U	mg/L						^ *
300.0	240-22669-I-1 MS	Nitrite as N	2.37		mg/L	2.50	95	80-120			^
300.0	240-22669-I-1	Nitrate as N	0.22		mg/L						
300.0	240-22669-I-1 MS	Nitrate as N	2.71		mg/L	2.50	100	80-120			
300.0	240-22669-I-1	Orthophosphate as P	0.50	U	mg/L						
300.0	240-22669-I-1 MS	Orthophosphate as P	3.80		mg/L	2.50	152	80-120			F
Batch ID: 80404	Date: 04/03/2013 13:22										
300.0	240-22685-C-1	Chloride	28		mg/L						
300.0	240-22685-C-1 MS	Chloride	85.0		mg/L	50.0	114	80-120			
300.0	240-22685-C-1	Sulfate	68		mg/L						
300.0	240-22685-C-1 MS	Sulfate	126		mg/L	50.0	114	80-120			
Batch ID: 80405	Date: 04/03/2013 13:22										
300.0	240-22685-C-1	Nitrite as N	0.099	J	mg/L						
300.0	240-22685-C-1 MS	Nitrite as N	2.85		mg/L	2.50	110	80-120			
300.0	240-22685-C-1	Nitrate as N	0.99		mg/L						
300.0	240-22685-C-1 MS	Nitrate as N	3.61		mg/L	2.50	105	80-120			
Batch ID: 81000	Date: 04/05/2013 18:40										
310.1	240-22726-AA-1	Alkalinity	470		mg/L						
310.1	240-22726-AA-1 MS	Alkalinity	697		mg/L	500	46	10-160			
Batch ID: 80845	Date: 04/05/2013 14:15										
350.3	240-22726-AE-1	Ammonia (as N)	0.26		mg/L						
350.3	240-22726-AE-1 MS	Ammonia (as N)	3.00		mg/L	2.50	110	75-125			
Batch ID: 81866	Date: 04/12/2013 12:47										
9060	240-22680-2	Dissolved Organic Carbon	2.1		mg/L						
9060	240-22680-2 MS	Dissolved Organic Carbon	29.6		mg/L	25.0	110	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 81000		Date: 04/05/2013 18:59									
310.1	240-22726-AA-1 MSD	Alkalinity	694		mg/L	500	45	10-160	1	24	
Batch ID: 80845		Date: 04/05/2013 14:19									
350.3	240-22726-AE-1 MSD	Ammonia (as N)	3.09		mg/L	2.50	113	75-125	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	80402	Date: 04/03/2013 10:45						
160.1		240-22666-I-1	Total Dissolved Solids	180	mg/L			
160.1		240-22666-I-1 DU	Total Dissolved Solids	156	mg/L	13	20	
Batch ID:	81000	Date: 04/05/2013 20:42						
310.1		240-22521-I-1	Alkalinity	320	mg/L			
310.1		240-22521-I-1 DU	Alkalinity	310	mg/L	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80402	Date: 04/03/2013 10:45										
						LCS Source: WCWIBBYSOLIDS_00002					
160.1	LCS 240-80402/2	Total Dissolved Solids	194		mg/L	206	94	88-110			
Batch ID: 80325	Date: 04/03/2013 00:22										
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80325/4	Chloride	46.0		mg/L	50.0	92	90-110			
Batch ID: 80326	Date: 04/03/2013 00:22										
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80326/4	Nitrite as N	2.21		mg/L	2.50	88	90-110			^ *
300.0	LCS 240-80326/4	Nitrate as N	2.31		mg/L	2.50	92	90-110			
300.0	LCS 240-80326/4	Orthophosphate as P	2.32		mg/L	2.50	93	90-110			
Batch ID: 80404	Date: 04/03/2013 12:00										
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80404/6	Chloride	48.7		mg/L	50.0	97	90-110			
300.0	LCS 240-80404/6	Sulfate	46.8		mg/L	50.0	94	90-110			
Batch ID: 80405	Date: 04/03/2013 12:00										
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80405/6	Nitrite as N	2.40		mg/L	2.50	96	90-110			
300.0	LCS 240-80405/6	Nitrate as N	2.46		mg/L	2.50	98	90-110			
300.0	LCS 240-80405/6	Orthophosphate as P	2.60		mg/L	2.50	104	90-110			
Batch ID: 81000	Date: 04/05/2013 17:19										
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-81000/2	Alkalinity	83.7		mg/L	79.5	105	90-127			
Batch ID: 80845	Date: 04/05/2013 12:33										
						LCS Source: WCSIMP192-505_00001					
350.3	LCS 240-80845/8	Ammonia (as N)	8.83		mg/L	8.93	99	85-114			
Batch ID: 81866	Date: 04/12/2013 11:55										
						LCS Source: WC LCS_00006					
9060	LCS 240-81866/4	Dissolved Organic Carbon	50.7		mg/L	48.1	105	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

FORM IX - IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22680-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/05/2013 17:11 End Date: 04/06/2013 03:30

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			17:11	
LCS 240-81000/2	1	T	17:19	X
MB 240-81000/3	1	T	17:26	X
ZZZZZZ			17:29	
ZZZZZZ			18:06	
ZZZZZZ			18:21	
240-22726-AA-1 MS	1	T	18:40	X
240-22726-AA-1 MSD	1	T	18:59	X
ZZZZZZ			19:13	
ZZZZZZ			19:26	
ZZZZZZ			19:37	
ZZZZZZ			19:51	
ZZZZZZ			20:03	
ZZZZZZ			20:15	
ZZZZZZ			20:19	
ZZZZZZ			20:31	
240-22521-I-1 DU	1	T	20:42	X
ZZZZZZ			21:33	
ZZZZZZ			21:39	
ZZZZZZ			21:46	
ZZZZZZ			21:53	
ZZZZZZ			22:06	
ZZZZZZ			22:18	
ZZZZZZ			22:31	
ZZZZZZ			22:35	
ZZZZZZ			22:46	
ZZZZZZ			22:57	
240-22680-2	1	T	23:03	X
ZZZZZZ			23:50	
ZZZZZZ			00:36	
ZZZZZZ			00:42	
ZZZZZZ			00:51	
ZZZZZZ			01:03	
ZZZZZZ			01:16	
ZZZZZZ			01:28	
ZZZZZZ			01:32	
ZZZZZZ			01:42	
ZZZZZZ			01:54	
ZZZZZZ			02:10	
ZZZZZZ			02:27	
ZZZZZZ			02:39	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/05/2013 17:11 End Date: 04/06/2013 03:30

Lab Sample Id	D/F	Type	Time	Analytes																										
				Alk																										
ZZZZZZ			02:50																											
ZZZZZZ			02:58																											
ZZZZZZ			03:09																											
ZZZZZZ			03:17																											
ZZZZZZ			03:27																											
ZZZZZZ			03:30																											

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 04/03/2013 10:45 End Date: 04/03/2013 10:45

Lab Sample Id	D/F	Type	Time	Analytes																										
				TDS																										
MB 240-80402/1	1	T	10:45	X																										
LCS 240-80402/2	1	T	10:45	X																										
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
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ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
240-22666-I-1 DU	1	T	10:45	X																										
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
240-22680-2	1	T	10:45	X																										
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											
ZZZZZZ			10:45																											

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/02/2013 23:33 End Date: 04/03/2013 03:56

Lab Sample Id	D/F	Type	Time	Analytes
				CL-
CCV 240-80325/1	1		23:33	X
CCB 240-80325/2	1		23:49	X
MB 240-80325/3	1	T	00:06	X
LCS 240-80325/4	1	T	00:22	X
ZZZZZZ			00:39	
240-22669-I-1 MS	1	T	00:55	X
ZZZZZZ			01:12	
240-22680-2	1	T	01:28	X
CCV 240-80325/9	1		01:44	X
CCB 240-80325/10	1		02:01	X
ZZZZZZ			02:17	
ZZZZZZ			02:34	
ZZZZZZ			02:50	
ZZZZZZ			03:06	
ZZZZZZ			03:23	
CCV 240-80325/16			03:39	
CCB 240-80325/17			03:56	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/02/2013 23:33 End Date: 04/03/2013 03:56

Lab Sample Id	D/F	Type	Time	Analytes																												
				N-No2	NO3	Orthophosp																										
CCV 240-80326/1	1		23:33	X	X	X																										
CCB 240-80326/2	1		23:49	X	X	X																										
MB 240-80326/3	1	T	00:06	X	X	X																										
LCS 240-80326/4	1	T	00:22	X	X	X																										
ZZZZZZ			00:39																													
240-22669-I-1 MS	1	T	00:55	X	X	X																										
ZZZZZZ			01:12																													
240-22680-2	1	T	01:28	X	X	X																										
CCV 240-80326/9	1		01:44	X	X	X																										
CCB 240-80326/10	1		02:01	X	X	X																										
ZZZZZZ			02:17																													
ZZZZZZ			02:34																													
ZZZZZZ			02:50																													
ZZZZZZ			03:06																													
ZZZZZZ			03:23																													
CCV 240-80326/16			03:39																													
CCB 240-80326/17			03:56																													

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/03/2013 10:54 End Date: 04/03/2013 20:51

Lab Sample Id	D/F	Type	Time	Analytes																												
				Cl-	SO4																											
ZZZZZZ			10:54																													
CCV 240-80404/3	1		11:11	X	X																											
CCB 240-80404/4	1		11:27	X	X																											
MB 240-80404/5	1	T	11:44	X	X																											
LCS 240-80404/6	1	T	12:00	X	X																											
240-22680-2	1	T	12:16		X																											
ZZZZZZ			12:33																													
ZZZZZZ			12:49																													
ZZZZZZ			13:06																													
240-22685-C-1 MS	1	T	13:22	X	X																											
ZZZZZZ			13:38																													
ZZZZZZ			13:55																													
ZZZZZZ			14:11																													
CCV 240-80404/15	1		14:28	X	X																											
CCB 240-80404/16	1		14:44	X	X																											
ZZZZZZ			15:00																													
ZZZZZZ			15:17																													
ZZZZZZ			15:33																													
ZZZZZZ			18:56																													
ZZZZZZ			19:13																													
ZZZZZZ			19:29																													
CCV 240-80404/27			19:46																													
CCB 240-80404/28			20:02																													
ZZZZZZ			20:19																													
CCV 240-80404/30			20:35																													
CCB 240-80404/31			20:51																													

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/03/2013 10:54 End Date: 04/03/2013 20:51

Lab Sample Id	D/F	Type	Time	Analytes																														
				N-No2	NO3	Orthophosp																														
ZZZZZZ			10:54																															
CCV 240-80405/3	1		11:11	X	X	X																												
CCB 240-80405/4	1		11:27	X	X	X																												
MB 240-80405/5	1	T	11:44	X	X	X																												
LCS 240-80405/6	1	T	12:00	X	X	X																												
240-22680-2 RA	1	T	12:16	X																														
ZZZZZZ			12:33																															
ZZZZZZ			12:49																															
ZZZZZZ			13:06																															
240-22685-C-1 MS	1	T	13:22	X	X																													
ZZZZZZ			13:38																															
ZZZZZZ			13:55																															
ZZZZZZ			14:11																															
CCV 240-80405/15	1		14:28	X	X	X																												
CCB 240-80405/16	1		14:44	X	X	X																												
ZZZZZZ			15:00																															
ZZZZZZ			15:17																															
ZZZZZZ			15:33																															
ZZZZZZ			17:51																															
ZZZZZZ			18:07																															
ZZZZZZ			18:24																															
ZZZZZZ			18:40																															
ZZZZZZ			18:56																															
ZZZZZZ			19:13																															
ZZZZZZ			19:29																															
CCV 240-80405/27			19:46																															
CCB 240-80405/28			20:02																															
ZZZZZZ			20:19																															
CCV 240-80405/30			20:35																															
CCB 240-80405/31			20:51																															

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/05/2013 11:57 End Date: 04/05/2013 17:12

Lab Sample Id	D/F	Type	Time	Analytes																										
				NH3																										
IC 240-80845/1			11:57	X																										
IC 240-80845/2			11:57	X																										
IC 240-80845/3			11:57	X																										
IC 240-80845/4			11:57	X																										
ICV 240-80845/5	5		11:57	X																										
ICB 240-80845/6	1		12:16	X																										
MB 240-80845/7	1	T	12:22	X																										
LCS 240-80845/8	5	T	12:33	X																										
ZZZZZZ			14:08																											
240-22726-AE-1 MS	1		14:15	X																										
240-22726-AE-1 MSD	1		14:19	X																										
ZZZZZZ			14:29																											
ZZZZZZ			14:35																											
ZZZZZZ			14:47																											
ZZZZZZ			15:10																											
ZZZZZZ			15:30																											
CCV 240-80845/17	1		15:33	X																										
CCB 240-80845/18	1		15:52	X																										
ZZZZZZ			15:56																											
ZZZZZZ			16:03																											
240-22680-2	1	T	16:07	X																										
ZZZZZZ			16:16																											
ZZZZZZ			16:20																											
ZZZZZZ			16:32																											
CCV 240-80845/25	1		16:47	X																										
CCB 240-80845/26	1		17:12	X																										

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22680-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/12/2013 11:22 End Date: 04/12/2013 15:54

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-81866/1	1		11:22	X
CCB 240-81866/2	1		11:33	X
MB 240-81866/3	1	D	11:44	X
LCS 240-81866/4	2	D	11:55	X
240-22680-2	1	D	12:06	X
240-22680-2 MS	2	D	12:47	X
ZZZZZZ			12:58	
ZZZZZZ			13:39	
ZZZZZZ			14:20	
ZZZZZZ			15:01	
CCV 240-81866/11	1		15:43	X
CCB 240-81866/12	1		15:54	X

Prep Types:
D = Dissolved

FORM XIII-IN

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 29, 2013**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / 1,4-DIOXANE / OVG / PERCHLORATE**
INORGANIC DATA VALIDATION – TOTAL & SELECT METALS / MISC ANALYSES
LOCKHEED MRC
SAMPLE DELIVERY GROUP (SDG) 240-22732-1

SAMPLES: 8 / Aqueous / VOC

MRC-MW-60A-040213	MRC-MW-60B-040213	MRC-MW-81B-040213
MRC-MW12A-040213	MRC-MW12C-040213	MRC-MW13A-040213
MRC-MW14C-040213	TB-040213	

4 / Aqueous / SVOC – 1,4-Dioxane

MRC-MW12A-040213	MRC-MW12C-040213	MRC-MW13A-040213
MRC-MW14C-040213		

3 / Aqueous / OVG / MISC – chloride, sulfate, nitrate-N, nitrite-N, ammonia-N, orthophosphate-P, alkalinity, TDS, dissolved organic carbon

MRC-MW-60B-040213	MRC-MW-81B-040213	MRC-MW12A-040213

2 / Aqueous / Perchlorate

MRC-MW-60A-040213	MRC-MW-60B-040213

3 / Aqueous / Total Metals Only

MRC-MW-60A-040213	MRC-MW-81A-040213	MRC-MW14C-040213

3 / Aqueous / Total & Select Metals & Silicon Dioxide

MRC-MW-60B-040213	MRC-MW-81B-040213	MRC-MW12A-040213

Overview

The sample set for Lockheed MRC, SDG 240-22732-1, consisted of nine (9) aqueous samples including one (1) aqueous trip blank sample. Eight (8) aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Four (4) aqueous samples were analyzed for the semi-volatile organic compound (SVOC) 1,4-dioxane as listed above. Three (3) aqueous samples were analyzed for organic volatile gases (OVG) and the miscellaneous inorganic analytes of chloride, sulfate, nitrate as Nitrogen (N), nitrite as N, ammonia as N, orthophosphate, alkalinity, total dissolved solids (TDS), and dissolved organic carbon, as listed above. Two (2) samples were analyzed for the analyte perchlorate as listed above. Three (3) aqueous samples were analyzed for total metals as listed above. Three (3) aqueous samples were analyzed for select metals and silicon dioxide as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on April 2, 2013 and analyzed by TestAmerica Laboratories, Inc., North Canton, Irvine, and Sacramento for the analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260B for VOCs, 8270D for SVOCs, 6010C for metals, 6020 for metals, 7470A for mercury, 9060 for dissolved organic carbon, and EPA Method 6850 for perchlorate, method RSK-175 for OVGs, Method 300.0 for anions, Method 310.1 for alkalinity, Method 350.3 for ammonia as nitrogen, and Method 160.1 for total dissolved solids, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank/preparation results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, ICP serial dilution results, ICP interference results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for vinyl acetate and tert-butyl alcohol on instrument A3UX15 on 04/04/13. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were also less than the 0.05 criteria for instrument A3UX15 on 04/09/13 @ 10:18.
  Affected Sample: All samples
  Action: All sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR).

- Sample MRC-MW14C-040213 had a positive VOC tentatively identified compound (TIC) result attributable to analytical column bleed (for trimethyl silanol).
  Affected Sample: MRC-MW14C-040213
  Actions: The sample positive trimethyl silanol analyte result was qualified rejected, (R), due to being associated with analytical column bleed.

Minor Problems

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% and less than the 50% quality control limit for carbon disulfide, methylene chloride, cis-1,3-dichloropropene, trans-1,3-dichloropropene, chlorodibromomethane, bromoform, 1,2-dibromo-3-chloropropane, and naphthalene for instrument A3UX15 on 04/09/13 @ 10:18.
  Affected Samples:

MRC-MW-60A-040213	MRC-MW-60B-040213	MRC-MW-81B-040213
MRC-MW12A-040213	MRC-MW12C-040213	MRC-MW13A-040213
MRC-MW14C-040213	TB-040213	

  Action: The sample positive methylene chloride results were qualified estimated, (J). The remaining aforementioned analyte sample results were non-detected and were not qualified.

- The contract required detection limit (CRDL) %R was less than the 80% (and >50%) quality control limit for mercury for CRA 440-99103/5-A.
  Affected Samples:
  MRC-MW-60A-040213 MRC-MW-81A-040213 MRC-MW14C-040213
  Actions: The non-detected sample mercury results were qualified biased non-detected low, (UL).

- The following metal contaminants were detected in the blank samples at the following maximum concentration:

Analyte	Maximum Conc. µg/L	Action Level µg/L
Calcium [1]	206	1030
Magnesium [1]	43.0	215.0
Manganese [1]	0.631	3.155
Copper [2]	0.893	4.465
Zinc [2]	4.56	22.80
Antimony [3]	0.311	1.555
Molybdenum [3]	0.308	1.540
Silver [3]	0.268	1.340

[1] Maximum concentration found in preparation blank MB 240-22732/1-A affecting samples MRC-MW-60B-040213, MRC-MW-81B-040213, and MRC-MW12A-040213.
[2] Maximum concentration found in a preparation blank sample MB 440-98768/1-A affecting samples MRC-MW-60A-040213, MRC-MW-60B-040213, MRC-MW-81A-040213, MRC-MW-81B-040213, MRC-MW14C-040213, and MRC-MW12A-040213.
[3] Maximum concentration found in initial and continuing calibration blanks ICB 440-99095/8, CCB 440-99095/25, CCB 440-99095/37 affecting samples MRC-MW-60A-040213, MRC-MW-60B-040213, MRC-MW-81A-040213, MRC-MW-81B-040213, MRC-MW14C-040213, and MRC-MW12A-040213.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Sample copper, zinc, antimony molybdenum, and silver positive results were qualified for blank contamination.

- The general chemistry orthophosphate as P matrix spike (MS) %R was less than the quality control limit for spiked sample MRC-MW-81B-040213.
  Affected Samples:
  MRC-MW-60B-040213 MRC-MW-81B-040213 MRC-MW12A-040213
  Action: The samples positive and non-detected orthophosphate as P results were qualified estimated, (J) and (UJ), respectively.

Notes

Samples were analyzed diluted for VOCs as listed below resulting in elevated concentrations for non-detected VOC analytes.

Sample	Dilution
MRC-MW-60A-040213	33.33X
MRC-MW-60B-040213	166.67X
MRC-MW-81B-040213	28.57X
MRC-MW12A-040213	55.56X

The VOC matrix spike (MS) and MS duplicate (MSD) %Rs were non-compliant for VOC analytes for a spiked sample from another SDG (240-22783-B-2). No validation action was necessary as the spiked sample was not from this SDG.

Sample MRC-MW12A-040213 was analyzed at a 5X dilution for 1,4-dioxane.

The CRDL %Rs were greater than the 110% quality control limit for arsenic, copper, and nickel for CRI 440-99095/9. The CRDL %Rs were greater than the 110% quality control limit for nickel and zinc for CRI 440-99095/10.

Affected Samples:

MRC-MW-60A-040213	MRC-MW-60B-040213	MRC-MW-81A-040213
MRC-MW-81B-040213	MRC-MW12A-040213	MRC-MW14C-040213

Actions: No validation action was taken for the non-detected analyte results. No validation action was taken for positive analyte results >2X the analyte CRQL. No action was taken for analytes that were qualified with competing qualifiers (for instance estimated, (J), or qualified for blank contamination, (B)). No sample analyte results were qualified for this issue.

The mercury analysis MS and MSD %Rs were non-compliant for a spiked sample from another SDG (lab id 440-43585-D-2-C). No validation action was necessary as the spiked sample was not from this SDG.

Sample MRC-MW-81B-040213 was diluted 2X for the chloride analysis.

The following laboratory anion contaminant was detected in the CCB and the method blank at the following maximum concentration affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Chloride [1]	0.346	1.730

[1] Maximum chloride blank result from CCB 240-81813/18 affecting sample MRC-MW-81B-040213.

An action level of five times the maximum level for the contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. The affected sample was not qualified for blank contamination.

The general chemistry chloride matrix spike (MS) %R was greater than the quality control limit for spiked sample from another SDG, sample ID 240-22706-A-1.

Action: No action was taken as the sample was from another SDG.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol and vinyl acetate sample results were rejected due to calibration and CCV RRF criteria non-compliances. Sample VOC results were qualified for CCV %D non-compliances. Sample metal results were qualified blank contamination. Sample mercury non-detected analyte results were qualified for a CRDL %R non-compliance.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). A positive sample MRC-MW14C-040213 VOC analyte attributed to column bleed was qualified rejected. Orthophosphate as P positive and non-detected results were qualified for a MS %R non-compliance.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260B, 8270D, 6010C, 6020, 7470A, 9060, EPA Method 6850, RSK-175, Method 300.0, Method 310.1, Method 350.3, and Method 160.1, the Region III EPA Functional Guidelines for Organic Data Validation (9/94), and the Region III EPA Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (April 1993).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW12C-040213			MRC-MW13A-040213			MRC-MW14C-040213		
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-3			240-22732-4			240-22732-5		
FRACTION: OV	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		13	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		12	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		10	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		16	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		25	J	P	0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		310			0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		7.2	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		9.4	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		24	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.33	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		8.3	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		6.7	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		37	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		13	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		12	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		10	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		7.8	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		8.9	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		7.2	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		32	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		55	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		6.1	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		23	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		10	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		6.7	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		18	U		0.32	U		0.32	U		0.32	U	
ACETONE		61	U		1.1	U		1.1	U		1.1	U	
BENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		16	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		8.3	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		36	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		23	U		0.41	U		0.41	U		0.41	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-60A-040213			MRC-MW-60B-040213			MRC-MW-81B-040213			TB-040213		
SDG: 240-22732-1	LAB_ID	240-22732-8			240-22732-9			240-22732-7			240-22732-1		
FRACTION: OV	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		7.7	U		38	U		6.6	U		0.23	U	
1,1,1-TRICHLOROETHANE		7.3	U		37	U		6.3	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		6	U		30	U		5.1	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		9.3	U		47	U		8	U		0.28	U	
1,1-DICHLOROETHANE		5	U		25	U		4.3	U		0.15	U	
1,1-DICHLOROETHENE		6.3	U		32	U		7.1	J	P	0.19	U	
1,1-DICHLOROPROPENE		4.3	U		22	U		3.7	U		0.13	U	
1,2,3-TRICHLOROBENZENE		5.7	U		28	U		4.9	U		0.17	U	
1,2,3-TRICHLOROPROPANE		14	U		72	U		12	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.2	U		0.98	U		0.17	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		5	U		25	U		4.3	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		4	U		20	U		3.4	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		22	U		110	U		19	U		0.67	U	
1,2-DIBROMOETHANE		8	U		40	U		6.9	U		0.24	U	
1,2-DICHLOROBENZENE		4.3	U		22	U		3.7	U		0.13	U	
1,2-DICHLOROETHANE		7.3	U		37	U		6.3	U		0.22	U	
1,2-DICHLOROPROPANE		6	U		30	U		5.1	U		0.18	U	
1,3-DICHLOROBENZENE		4.7	U		23	U		4	U		0.14	U	
1,3-DICHLOROPROPANE		5.3	U		27	U		4.6	U		0.16	U	
1,4-DICHLOROBENZENE		4.3	U		22	U		3.7	U		0.13	U	
2,2-DICHLOROPROPANE		4.3	U		22	U		3.7	U		0.13	U	
2-BUTANONE		19	U		95	U		16	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		33	U		170	U		28	U		0.99	U	
2-CHLOROTOLUENE		3.7	U		18	U		3.1	U		0.11	U	
2-HEXANONE		14	U		68	U		12	U		0.41	U	
4-CHLOROTOLUENE		6	U		30	U		5.1	U		0.18	U	
4-ISOPROPYLTOLUENE		4	U		20	U		3.4	U		0.12	U	
4-METHYL-2-PENTANONE		11	U		53	U		9.1	U		0.32	U	
ACETONE		37	U		180	U		31	U		1.1	U	
BENZENE		4.3	U		22	U		3.7	U		0.13	U	
BROMOBENZENE		4.3	U		22	U		3.7	U		0.13	U	
BROMOCHLOROMETHANE		9.7	U		48	U		8.3	U		0.29	U	
BROMODICHLOROMETHANE		5	U		25	U		4.3	U		0.15	U	
BROMOFORM		21	U		110	U		18	U		0.64	U	
BROMOMETHANE		14	U		68	U		12	U		0.41	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW12C-040213			MRC-MW13A-040213			MRC-MW14C-040213		
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-3			240-22732-4			240-22732-5		
FRACTION: OV	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		7.2	U		0.13	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		7.2	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		8.3	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		10	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		16	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		8.9	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		17	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		110			0.17	U		0.18	J	P	0.17	U	
CIS-1,3-DICHLOROPROPENE		7.8	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		16	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		17	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		83	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		6.1	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		9.4	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		17	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		13	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		9.4	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		32	J	CP	0.33	U		0.33	U		0.33	U	
NAPHTHALENE		13	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		6.7	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		7.8	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		7.8	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
SILANOL, TRIMETHYL-											1.4	R	Z2
STYRENE		6.1	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		3.7	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		7.2	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		220	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		16	U		0.29	U		0.29	U		0.29	U	
TOLUENE		7.2	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		16	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		11	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		11	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		1500			0.17	J	P	0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-60A-040213			MRC-MW-60B-040213			MRC-MW-81B-040213			TB-040213		
SDG: 240-22732-1	LAB_ID	240-22732-8			240-22732-9			240-22732-7			240-22732-1		
FRACTION: OV	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		4.3	U		22	U		3.7	U		0.13	U	
CARBON TETRACHLORIDE		4.3	U		22	U		3.7	U		0.13	U	
CHLOROBENZENE		5	U		25	U		4.3	U		0.15	U	
CHLORODIBROMOMETHANE		6	U		30	U		5.1	U		0.18	U	
CHLOROETHANE		9.7	U		48	U		8.3	U		0.29	U	
CHLOROFORM		5.3	U		27	U		4.6	U		0.16	U	
CHLOROMETHANE		10	U		50	U		8.6	U		0.3	U	
CIS-1,2-DICHLOROETHENE		260			150	J	P	220			0.17	U	
CIS-1,3-DICHLOROPROPENE		4.7	U		23	U		4	U		0.14	U	
DIBROMOMETHANE		9.3	U		47	U		8	U		0.28	U	
DICHLORODIFLUOROMETHANE		10	U		52	U		8.9	U		0.31	U	
DIISOPROPYL ETHER		50	U		250	U		43	U		1.5	U	
ETHYL TERT-BUTYL ETHER		3.7	U		18	U		3.1	U		0.11	U	
ETHYLBENZENE		5.7	U		28	U		4.9	U		0.17	U	
HEXACHLOROBUTADIENE		10	U		50	U		8.6	U		0.3	U	
ISOPROPYLBENZENE		4.3	U		22	U		3.7	U		0.13	U	
M+P-XYLENES		8	U		40	U		6.9	U		0.24	U	
METHYL TERT-BUTYL ETHER		5.7	U		28	U		4.9	U		0.17	U	
METHYLENE CHLORIDE		18	J	CP	82	J	CP	13	J	CP	0.33	U	
NAPHTHALENE		8	U		40	U		6.9	U		0.24	U	
N-BUTYLBENZENE		4	U		20	U		3.4	U		0.12	U	
N-PROPYLBENZENE		4.7	U		23	U		4	U		0.14	U	
O-XYLENE		4.7	U		23	U		4	U		0.14	U	
SEC-BUTYLBENZENE		4.3	U		22	U		3.7	U		0.13	U	
SILANOL, TRIMETHYL-													
STYRENE		3.7	U		18	U		3.1	U		0.11	U	
TERT-AMYL METHYL ETHER		2.2	U		11	U		1.9	U		0.067	U	
TERT-BUTYLBENZENE		4.3	U		22	U		3.7	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		130	UR	C	650	UR	C	110	UR	C	3.9	UR	C
TETRACHLOROETHENE		13	J	P	48	U		8.3	U		0.29	U	
TOLUENE		4.3	U		22	U		3.7	U		0.13	U	
TOTAL XYLENES		9.3	U		47	U		8	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		6.3	U		32	U		7.7	J	P	0.19	U	
TRANS-1,3-DICHLOROPROPENE		6.3	U		32	U		5.4	U		0.19	U	
TRICHLOROETHENE		870			5100			700			0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW12C-040213			MRC-MW13A-040213			MRC-MW14C-040213		
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-3			240-22732-4			240-22732-5		
FRACTION: OV	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		12	U		0.21	U		0.21	U		0.21	U	
VINYL ACETATE		11	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		12	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-60A-040213			MRC-MW-60B-040213			MRC-MW-81B-040213			TB-040213		
SDG: 240-22732-1	LAB_ID	240-22732-8			240-22732-9			240-22732-7			240-22732-1		
FRACTION: OV	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		7	U		35	U		6	U		0.21	U	
VINYL ACETATE		6.3	UR	C	32	UR	C	5.4	UR	C	0.19	UR	C
VINYL CHLORIDE		35			37	U		50			0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW12C-040213			MRC-MW13A-040213			MRC-MW14C-040213		
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-3			240-22732-4			240-22732-5		
FRACTION: OS	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		170			0.47	U		0.49	U		0.49	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW-60B-040213			MRC-MW-81B-040213		
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-9			240-22732-7		
FRACTION: OVG	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.1	U		0.1	U		0.29	J	P
ETHENE		1.3			0.37	U		8		
METHANE		53			70			450		

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW14C-040213			MRC-MW-60A-040213			MRC-MW-60B-040213		
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-5			240-22732-8			240-22732-9		
FRACTION: M	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.32	B	A	0.3	U		0.3	U	
ARSENIC		0.9	U		0.9	U		1.8	J	P	0.9	U	
BARIUM		69			59			53			62		
BERYLLIUM		0.57	J	P	0.1	U		2.2			0.39	J	P
CADMIUM		0.1	U		0.1	U		0.1	U		0.1	U	
CALCIUM		7200									4000	J	P
CHROMIUM		0.9	U		0.9	U		0.9	U		0.9	U	
COBALT		44			5.5			67			41		
COPPER		1.1	B	A	0.83	B	A	0.61	B	A	0.5	U	
IRON		33000									16000		
LEAD		0.48	J	P	0.27	J	P	0.2	U		0.2	U	
MAGNESIUM		5800									5600		
MANGANESE		1900									2000		
MERCURY		0.12	U		0.1	UL	C	0.1	UL	C	0.12	U	
MOLYBDENUM		0.2	U		0.71	B	A	0.2	U		0.2	U	
NICKEL		78			7.3			70			66		
POTASSIUM		1900	J	P							2200	J	P
SELENIUM		0.5	U		0.5	U		0.5	U		0.5	U	
SILICON DIOXIDE		16000									11000		
SILVER		0.1	U		0.36	B	A	0.1	U		0.1	U	
SODIUM		9900									13000		
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		0.8	U		0.93	J	P	0.8	U		0.8	U	
ZINC		150			4	U		49			110		

PROJ_NO: 04795	NSAMPLE	MRC-MW-81A-040213			MRC-MW-81B-040213		
SDG: 240-22732-1	LAB_ID	240-22732-6			240-22732-7		
FRACTION: M	SAMP_DATE	4/2/2013			4/2/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U	
ARSENIC		1.2	J	P	0.9	U	
BARIUM		120			200		
BERYLLIUM		1.6			0.1	U	
CADMIUM		0.1	U		0.1	U	
CALCIUM					110000		
CHROMIUM		0.9	U		6.1		
COBALT		86			4.5		
COPPER		0.5	U		0.65	B	A
IRON					3400		
LEAD		0.2	U		0.23	J	P
MAGNESIUM					1400	J	P
MANGANESE					190		
MERCURY		0.1	UL	C	0.12	U	
MOLYBDENUM		0.2	U		0.97	B	A
NICKEL		120			13		
POTASSIUM					2800	J	P
SELENIUM		0.83	J	P	0.5	U	
SILICON DIOXIDE					5700		
SILVER		0.1	U		0.1	U	
SODIUM					100000		
THALLIUM		0.2	U		0.2	U	
VANADIUM		0.8	U		1.2	J	P
ZINC		66			16	B	A

PROJ_NO: 04795	NSAMPLE	MRC-MW12A-040213			MRC-MW-60A-040213			MRC-MW-60B-040213					
SDG: 240-22732-1	LAB_ID	240-22732-2			240-22732-8			240-22732-9					
FRACTION: MISC	SAMP_DATE	4/2/2013			4/2/2013			4/2/2013					
MEDIA: WATER	QC_TYPE	NM			NM			NM					
	UNITS	MG/L			UG/L			MG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		14						57					
AMMONIA-N		0.069	J	P				0.041	J	P			
CHLORIDE		47						16					
DISSOLVED ORGANIC CARBON		1.7						0.57	J	P			
NITRATE-N		0.023	U					0.023	U				
NITRITE-N		0.012	U					0.012	U				
ORTHOPHOSPHATE-P		0.34	J	DP				0.044	UJ	D			
PERCHLORATE					0.082	U					0.082	U	
SULFATE		1.6						2.5					
TOTAL DISSOLVED SOLIDS		120						91					

PROJ_NO: 04795	NSAMPLE	MRC-MW-81B-040213		
SDG: 240-22732-1	LAB_ID	240-22732-7		
FRACTION: MISC	SAMP_DATE	4/2/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALKALINITY		9		
AMMONIA-N		0.7		
CHLORIDE		390		
DISSOLVED ORGANIC CARBON		1.7		
NITRATE-N		0.023	U	
NITRITE-N		0.012	U	
ORTHOPHOSPHATE-P		0.044	UJ	D
PERCHLORATE				
SULFATE		14		
TOTAL DISSOLVED SOLIDS		570		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60A-040213 | Lab Sample ID: 240-22732-8

Matrix: Water | Lab File ID: UXC0574.D

Analysis Method: 8260B | Date Collected: 04/02/2013 14:34

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 18:13

Soil Aliquot Vol: | Dilution Factor: 33.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	170	U	170	37
71-43-2	Benzene	33	U	33	4.3
108-86-1	Bromobenzene	33	U	33	4.3
74-97-5	Bromochloromethane	33	U	33	9.7
75-27-4	Bromodichloromethane	33	U	33	5.0
75-25-2	Bromoform	33	U	33	21
74-83-9	Bromomethane	33	U	33	14
78-93-3	2-Butanone	170	U	170	19
75-15-0	Carbon disulfide	33	U	33	4.3
56-23-5	Carbon tetrachloride	33	U	33	4.3
108-90-7	Chlorobenzene	33	U	33	5.0
75-00-3	Chloroethane	33	U	33	9.7
110-75-8	2-Chloroethyl vinyl ether	330	U	330	33
67-66-3	Chloroform	33	U	33	5.3
74-87-3	Chloromethane	33	U	33	10
95-49-8	2-Chlorotoluene	33	U	33	3.7
106-43-4	4-Chlorotoluene	33	U	33	6.0
156-59-2	cis-1,2-Dichloroethene	260		33	5.7
10061-01-5	cis-1,3-Dichloropropene	33	U	33	4.7
124-48-1	Dibromochloromethane	33	U	33	6.0
96-12-8	1,2-Dibromo-3-Chloropropane	170	U	170	22
106-93-4	1,2-Dibromoethane	33	U	33	8.0
74-95-3	Dibromomethane	33	U	33	9.3
95-50-1	1,2-Dichlorobenzene	33	U	33	4.3
541-73-1	1,3-Dichlorobenzene	33	U	33	4.7
106-46-7	1,4-Dichlorobenzene	33	U	33	4.3
75-71-8	Dichlorodifluoromethane	33	U	33	10
75-34-3	1,1-Dichloroethane	33	U	33	5.0
107-06-2	1,2-Dichloroethane	33	U	33	7.3
75-35-4	1,1-Dichloroethene	33	U	33	6.3
78-87-5	1,2-Dichloropropane	33	U	33	6.0
142-28-9	1,3-Dichloropropane	33	U	33	5.3
594-20-7	2,2-Dichloropropane	33	U	33	4.3
563-58-6	1,1-Dichloropropene	33	U	33	4.3
108-20-3	Diisopropyl ether	170	U	170	50
100-41-4	Ethylbenzene	33	U	33	5.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60A-040213 Lab Sample ID: 240-22732-8

Matrix: Water Lab File ID: UXC0574.D

Analysis Method: 8260B Date Collected: 04/02/2013 14:34

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:13

Soil Aliquot Vol: Dilution Factor: 33.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	170	U	170	3.7
87-68-3	Hexachlorobutadiene	33	U	33	10
591-78-6	2-Hexanone	170	U	170	14
98-82-8	Isopropylbenzene	33	U	33	4.3
75-09-2	Methylene Chloride	18	J	33	11
108-10-1	4-Methyl-2-pentanone	170	U	170	11
1634-04-4	Methyl tert-butyl ether	33	U	33	5.7
179601-23-1	m-Xylene & p-Xylene	67	U	67	8.0
91-20-3	Naphthalene	33	U	33	8.0
104-51-8	n-Butylbenzene	33	U	33	4.0
103-65-1	n-Propylbenzene	33	U	33	4.7
95-47-6	o-Xylene	33	U	33	4.7
99-87-6	p-Isopropyltoluene	33	U	33	4.0
135-98-8	sec-Butylbenzene	33	U	33	4.3
100-42-5	Styrene	33	U	33	3.7
994-05-8	Tert-amyl-methyl ether (TAME)	170	U	170	2.2
75-65-0	tert-Butyl alcohol	670	U	670	130
98-06-6	tert-Butylbenzene	33	U	33	4.3
630-20-6	1,1,1,2-Tetrachloroethane	33	U	33	7.7
79-34-5	1,1,2,2-Tetrachloroethane	33	U	33	6.0
127-18-4	Tetrachloroethene	13	J	33	9.7
108-88-3	Toluene	33	U	33	4.3
156-60-5	trans-1,2-Dichloroethene	33	U	33	6.3
10061-02-6	trans-1,3-Dichloropropene	33	U	33	6.3
87-61-6	1,2,3-Trichlorobenzene	33	U	33	5.7
120-82-1	1,2,4-Trichlorobenzene	33	U	33	5.0
71-55-6	1,1,1-Trichloroethane	33	U	33	7.3
79-01-6	Trichloroethene	870		33	5.7
75-69-4	Trichlorofluoromethane	33	U	33	7.0
96-18-4	1,2,3-Trichloropropane	33	U	33	14
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	33	U	33	9.3
526-73-8	1,2,3-Trimethylbenzene	170	U	170	0.20
95-63-6	1,2,4-Trimethylbenzene	33	U	33	4.0
108-05-4	Vinyl acetate	67	U	67	6.3
75-01-4	Vinyl chloride	35		33	7.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60A-040213 Lab Sample ID: 240-22732-8

Matrix: Water Lab File ID: UXC0574.D

Analysis Method: 8260B Date Collected: 04/02/2013 14:34

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:13

Soil Aliquot Vol: Dilution Factor: 33.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	67	U	67	9.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	96		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60A-040213 Lab Sample ID: 240-22732-8

Matrix: Water Lab File ID: UXC0574.D

Analysis Method: 8260B Date Collected: 04/02/2013 14:34

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:13

Soil Aliquot Vol: Dilution Factor: 33.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 | Lab Sample ID: 240-22732-9

Matrix: Water | Lab File ID: UXC0575.D

Analysis Method: 8260B | Date Collected: 04/02/2013 15:44

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 18:36

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	830	U	830	180
71-43-2	Benzene	170	U	170	22
108-86-1	Bromobenzene	170	U	170	22
74-97-5	Bromochloromethane	170	U	170	48
75-27-4	Bromodichloromethane	170	U	170	25
75-25-2	Bromoform	170	U	170	110
74-83-9	Bromomethane	170	U	170	68
78-93-3	2-Butanone	830	U	830	95
75-15-0	Carbon disulfide	170	U	170	22
56-23-5	Carbon tetrachloride	170	U	170	22
108-90-7	Chlorobenzene	170	U	170	25
75-00-3	Chloroethane	170	U	170	48
110-75-8	2-Chloroethyl vinyl ether	1700	U	1700	170
67-66-3	Chloroform	170	U	170	27
74-87-3	Chloromethane	170	U	170	50
95-49-8	2-Chlorotoluene	170	U	170	18
106-43-4	4-Chlorotoluene	170	U	170	30
156-59-2	cis-1,2-Dichloroethene	150	J	170	28
10061-01-5	cis-1,3-Dichloropropene	170	U	170	23
124-48-1	Dibromochloromethane	170	U	170	30
96-12-8	1,2-Dibromo-3-Chloropropane	830	U	830	110
106-93-4	1,2-Dibromoethane	170	U	170	40
74-95-3	Dibromomethane	170	U	170	47
95-50-1	1,2-Dichlorobenzene	170	U	170	22
541-73-1	1,3-Dichlorobenzene	170	U	170	23
106-46-7	1,4-Dichlorobenzene	170	U	170	22
75-71-8	Dichlorodifluoromethane	170	U	170	52
75-34-3	1,1-Dichloroethane	170	U	170	25
107-06-2	1,2-Dichloroethane	170	U	170	37
75-35-4	1,1-Dichloroethene	170	U	170	32
78-87-5	1,2-Dichloropropane	170	U	170	30
142-28-9	1,3-Dichloropropane	170	U	170	27
594-20-7	2,2-Dichloropropane	170	U	170	22
563-58-6	1,1-Dichloropropene	170	U	170	22
108-20-3	Diisopropyl ether	830	U	830	250
100-41-4	Ethylbenzene	170	U	170	28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Matrix: Water Lab File ID: UXC0575.D

Analysis Method: 8260B Date Collected: 04/02/2013 15:44

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:36

Soil Aliquot Vol: Dilution Factor: 166.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	830	U	830	18
87-68-3	Hexachlorobutadiene	170	U	170	50
591-78-6	2-Hexanone	830	U	830	68
98-82-8	Isopropylbenzene	170	U	170	22
75-09-2	Methylene Chloride	82	J	170	55
108-10-1	4-Methyl-2-pentanone	830	U	830	53
1634-04-4	Methyl tert-butyl ether	170	U	170	28
179601-23-1	m-Xylene & p-Xylene	330	U	330	40
91-20-3	Naphthalene	170	U	170	40
104-51-8	n-Butylbenzene	170	U	170	20
103-65-1	n-Propylbenzene	170	U	170	23
95-47-6	o-Xylene	170	U	170	23
99-87-6	p-Isopropyltoluene	170	U	170	20
135-98-8	sec-Butylbenzene	170	U	170	22
100-42-5	Styrene	170	U	170	18
994-05-8	Tert-amyl-methyl ether (TAME)	830	U	830	11
75-65-0	tert-Butyl alcohol	3300	U	3300	650
98-06-6	tert-Butylbenzene	170	U	170	22
630-20-6	1,1,1,2-Tetrachloroethane	170	U	170	38
79-34-5	1,1,2,2-Tetrachloroethane	170	U	170	30
127-18-4	Tetrachloroethene	170	U	170	48
108-88-3	Toluene	170	U	170	22
156-60-5	trans-1,2-Dichloroethene	170	U	170	32
10061-02-6	trans-1,3-Dichloropropene	170	U	170	32
87-61-6	1,2,3-Trichlorobenzene	170	U	170	28
120-82-1	1,2,4-Trichlorobenzene	170	U	170	25
71-55-6	1,1,1-Trichloroethane	170	U	170	37
79-01-6	Trichloroethene	5100		170	28
75-69-4	Trichlorofluoromethane	170	U	170	35
96-18-4	1,2,3-Trichloropropane	170	U	170	72
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	170	U	170	47
526-73-8	1,2,3-Trimethylbenzene	830	U	830	0.98
95-63-6	1,2,4-Trimethylbenzene	170	U	170	20
108-05-4	Vinyl acetate	330	U	330	32
75-01-4	Vinyl chloride	170	U	170	37

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 | Lab Sample ID: 240-22732-9

Matrix: Water | Lab File ID: UXC0575.D

Analysis Method: 8260B | Date Collected: 04/02/2013 15:44

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 18:36

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	330	U	330	47

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Matrix: Water Lab File ID: UXC0575.D

Analysis Method: 8260B Date Collected: 04/02/2013 15:44

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:36

Soil Aliquot Vol: Dilution Factor: 166.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-81B-040213 | Lab Sample ID: 240-22732-7

Matrix: Water | Lab File ID: UXC0573.D

Analysis Method: 8260B | Date Collected: 04/02/2013 12:11

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 17:51

Soil Aliquot Vol: | Dilution Factor: 28.57

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	140	U	140	31
71-43-2	Benzene	29	U	29	3.7
108-86-1	Bromobenzene	29	U	29	3.7
74-97-5	Bromochloromethane	29	U	29	8.3
75-27-4	Bromodichloromethane	29	U	29	4.3
75-25-2	Bromoform	29	U	29	18
74-83-9	Bromomethane	29	U	29	12
78-93-3	2-Butanone	140	U	140	16
75-15-0	Carbon disulfide	29	U	29	3.7
56-23-5	Carbon tetrachloride	29	U	29	3.7
108-90-7	Chlorobenzene	29	U	29	4.3
75-00-3	Chloroethane	29	U	29	8.3
110-75-8	2-Chloroethyl vinyl ether	290	U	290	28
67-66-3	Chloroform	29	U	29	4.6
74-87-3	Chloromethane	29	U	29	8.6
95-49-8	2-Chlorotoluene	29	U	29	3.1
106-43-4	4-Chlorotoluene	29	U	29	5.1
156-59-2	cis-1,2-Dichloroethene	220		29	4.9
10061-01-5	cis-1,3-Dichloropropene	29	U	29	4.0
124-48-1	Dibromochloromethane	29	U	29	5.1
96-12-8	1,2-Dibromo-3-Chloropropane	140	U	140	19
106-93-4	1,2-Dibromoethane	29	U	29	6.9
74-95-3	Dibromomethane	29	U	29	8.0
95-50-1	1,2-Dichlorobenzene	29	U	29	3.7
541-73-1	1,3-Dichlorobenzene	29	U	29	4.0
106-46-7	1,4-Dichlorobenzene	29	U	29	3.7
75-71-8	Dichlorodifluoromethane	29	U	29	8.9
75-34-3	1,1-Dichloroethane	29	U	29	4.3
107-06-2	1,2-Dichloroethane	29	U	29	6.3
75-35-4	1,1-Dichloroethene	7.1	J	29	5.4
78-87-5	1,2-Dichloropropane	29	U	29	5.1
142-28-9	1,3-Dichloropropane	29	U	29	4.6
594-20-7	2,2-Dichloropropane	29	U	29	3.7
563-58-6	1,1-Dichloropropene	29	U	29	3.7
108-20-3	Diisopropyl ether	140	U	140	43
100-41-4	Ethylbenzene	29	U	29	4.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Matrix: Water Lab File ID: UXC0573.D

Analysis Method: 8260B Date Collected: 04/02/2013 12:11

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:51

Soil Aliquot Vol: Dilution Factor: 28.57

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	140	U	140	3.1
87-68-3	Hexachlorobutadiene	29	U	29	8.6
591-78-6	2-Hexanone	140	U	140	12
98-82-8	Isopropylbenzene	29	U	29	3.7
75-09-2	Methylene Chloride	13	J	29	9.4
108-10-1	4-Methyl-2-pentanone	140	U	140	9.1
1634-04-4	Methyl tert-butyl ether	29	U	29	4.9
179601-23-1	m-Xylene & p-Xylene	57	U	57	6.9
91-20-3	Naphthalene	29	U	29	6.9
104-51-8	n-Butylbenzene	29	U	29	3.4
103-65-1	n-Propylbenzene	29	U	29	4.0
95-47-6	o-Xylene	29	U	29	4.0
99-87-6	p-Isopropyltoluene	29	U	29	3.4
135-98-8	sec-Butylbenzene	29	U	29	3.7
100-42-5	Styrene	29	U	29	3.1
994-05-8	Tert-amyl-methyl ether (TAME)	140	U	140	1.9
75-65-0	tert-Butyl alcohol	570	U	570	110
98-06-6	tert-Butylbenzene	29	U	29	3.7
630-20-6	1,1,1,2-Tetrachloroethane	29	U	29	6.6
79-34-5	1,1,2,2-Tetrachloroethane	29	U	29	5.1
127-18-4	Tetrachloroethene	29	U	29	8.3
108-88-3	Toluene	29	U	29	3.7
156-60-5	trans-1,2-Dichloroethene	7.7	J	29	5.4
10061-02-6	trans-1,3-Dichloropropene	29	U	29	5.4
87-61-6	1,2,3-Trichlorobenzene	29	U	29	4.9
120-82-1	1,2,4-Trichlorobenzene	29	U	29	4.3
71-55-6	1,1,1-Trichloroethane	29	U	29	6.3
79-01-6	Trichloroethene	700		29	4.9
75-69-4	Trichlorofluoromethane	29	U	29	6.0
96-18-4	1,2,3-Trichloropropane	29	U	29	12
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	29	U	29	8.0
526-73-8	1,2,3-Trimethylbenzene	140	U	140	0.17
95-63-6	1,2,4-Trimethylbenzene	29	U	29	3.4
108-05-4	Vinyl acetate	57	U	57	5.4
75-01-4	Vinyl chloride	50		29	6.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Matrix: Water Lab File ID: UXC0573.D

Analysis Method: 8260B Date Collected: 04/02/2013 12:11

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:51

Soil Aliquot Vol: Dilution Factor: 28.57

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	57	U	57	8.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Matrix: Water Lab File ID: UXC0573.D

Analysis Method: 8260B Date Collected: 04/02/2013 12:11

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:51

Soil Aliquot Vol: Dilution Factor: 28.57

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 | Lab Sample ID: 240-22732-2

Matrix: Water | Lab File ID: UXC0569.D

Analysis Method: 8260B | Date Collected: 04/02/2013 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 16:20

Soil Aliquot Vol: | Dilution Factor: 55.56

Soil Extract Vol.: | GC Column: ~~DB-624~~ ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	280	U	280	61
71-43-2	Benzene	56	U	56	7.2
108-86-1	Bromobenzene	56	U	56	7.2
74-97-5	Bromochloromethane	56	U	56	16
75-27-4	Bromodichloromethane	56	U	56	8.3
75-25-2	Bromoform	56	U	56	36
74-83-9	Bromomethane	56	U	56	23
78-93-3	2-Butanone	280	U	280	32
75-15-0	Carbon disulfide	56	U	56	7.2
56-23-5	Carbon tetrachloride	56	U	56	7.2
108-90-7	Chlorobenzene	56	U	56	8.3
75-00-3	Chloroethane	56	U	56	16
110-75-8	2-Chloroethyl vinyl ether	560	U	560	55
67-66-3	Chloroform	56	U	56	8.9
74-87-3	Chloromethane	56	U	56	17
95-49-8	2-Chlorotoluene	56	U	56	6.1
106-43-4	4-Chlorotoluene	56	U	56	10
156-59-2	cis-1,2-Dichloroethene	110		56	9.4
10061-01-5	cis-1,3-Dichloropropene	56	U	56	7.8
124-48-1	Dibromochloromethane	56	U	56	10
96-12-8	1,2-Dibromo-3-Chloropropane	280	U	280	37
106-93-4	1,2-Dibromoethane	56	U	56	13
74-95-3	Dibromomethane	56	U	56	16
95-50-1	1,2-Dichlorobenzene	56	U	56	7.2
541-73-1	1,3-Dichlorobenzene	56	U	56	7.8
106-46-7	1,4-Dichlorobenzene	56	U	56	7.2
75-71-8	Dichlorodifluoromethane	56	U	56	17
75-34-3	1,1-Dichloroethane	25	J	56	8.3
107-06-2	1,2-Dichloroethane	56	U	56	12
75-35-4	1,1-Dichloroethene	310		56	11
78-87-5	1,2-Dichloropropane	56	U	56	10
142-28-9	1,3-Dichloropropane	56	U	56	8.9
594-20-7	2,2-Dichloropropane	56	U	56	7.2
563-58-6	1,1-Dichloropropene	56	U	56	7.2
108-20-3	Diisopropyl ether	280	U	280	83
100-41-4	Ethylbenzene	56	U	56	9.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Matrix: Water Lab File ID: UXC0569.D

Analysis Method: 8260B Date Collected: 04/02/2013 11:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 16:20

Soil Aliquot Vol: Dilution Factor: 55.56

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	280	U	280	6.1
87-68-3	Hexachlorobutadiene	56	U	56	17
591-78-6	2-Hexanone	280	U	280	23
98-82-8	Isopropylbenzene	56	U	56	7.2
75-09-2	Methylene Chloride	32	J	56	18
108-10-1	4-Methyl-2-pentanone	280	U	280	18
1634-04-4	Methyl tert-butyl ether	56	U	56	9.4
179601-23-1	m-Xylene & p-Xylene	110	U	110	13
91-20-3	Naphthalene	56	U	56	13
104-51-8	n-Butylbenzene	56	U	56	6.7
103-65-1	n-Propylbenzene	56	U	56	7.8
95-47-6	o-Xylene	56	U	56	7.8
99-87-6	p-Isopropyltoluene	56	U	56	6.7
135-98-8	sec-Butylbenzene	56	U	56	7.2
100-42-5	Styrene	56	U	56	6.1
994-05-8	Tert-amyl-methyl ether (TAME)	280	U	280	3.7
75-65-0	tert-Butyl alcohol	1100	U	1100	220
98-06-6	tert-Butylbenzene	56	U	56	7.2
630-20-6	1,1,1,2-Tetrachloroethane	56	U	56	13
79-34-5	1,1,2,2-Tetrachloroethane	56	U	56	10
127-18-4	Tetrachloroethene	56	U	56	16
108-88-3	Toluene	56	U	56	7.2
156-60-5	trans-1,2-Dichloroethene	56	U	56	11
10061-02-6	trans-1,3-Dichloropropene	56	U	56	11
87-61-6	1,2,3-Trichlorobenzene	56	U	56	9.4
120-82-1	1,2,4-Trichlorobenzene	56	U	56	8.3
71-55-6	1,1,1-Trichloroethane	56	U	56	12
79-01-6	Trichloroethene	1500		56	9.4
75-69-4	Trichlorofluoromethane	56	U	56	12
96-18-4	1,2,3-Trichloropropane	56	U	56	24
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	56	U	56	16
526-73-8	1,2,3-Trimethylbenzene	280	U	280	0.33
95-63-6	1,2,4-Trimethylbenzene	56	U	56	6.7
108-05-4	Vinyl acetate	110	U	110	11
75-01-4	Vinyl chloride	56	U	56	12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Matrix: Water Lab File ID: UXC0569.D

Analysis Method: 8260B Date Collected: 04/02/2013 11:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 16:20

Soil Aliquot Vol: Dilution Factor: 55.56

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	110	U	110	16

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
2037-26-5	Toluene-d8 (Surr)	93		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Matrix: Water Lab File ID: UXC0569.D

Analysis Method: 8260B Date Collected: 04/02/2013 11:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 16:20

Soil Aliquot Vol: Dilution Factor: 55.56

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12C-040213 Lab Sample ID: 240-22732-3

Matrix: Water Lab File ID: UXC0570.D

Analysis Method: 8260B Date Collected: 04/02/2013 12:25

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 16:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12C-040213 | Lab Sample ID: 240-22732-3

Matrix: Water | Lab File ID: UXC0570.D

Analysis Method: 8260B | Date Collected: 04/02/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 16:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.17	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12C-040213 | Lab Sample ID: 240-22732-3

Matrix: Water | Lab File ID: UXC0570.D

Analysis Method: 8260B | Date Collected: 04/02/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 16:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	91		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12C-040213 Lab Sample ID: 240-22732-3

Matrix: Water Lab File ID: UXC0570.D

Analysis Method: 8260B Date Collected: 04/02/2013 12:25

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 16:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW13A-040213 | Lab Sample ID: 240-22732-4

Matrix: Water | Lab File ID: UXC0571.D

Analysis Method: 8260B | Date Collected: 04/02/2013 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 17:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.18	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW13A-040213 Lab Sample ID: 240-22732-4

Matrix: Water Lab File ID: UXC0571.D

Analysis Method: 8260B Date Collected: 04/02/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW13A-040213 Lab Sample ID: 240-22732-4

Matrix: Water Lab File ID: UXC0571.D

Analysis Method: 8260B Date Collected: 04/02/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW13A-040213 Lab Sample ID: 240-22732-4

Matrix: Water Lab File ID: UXC0571.D

Analysis Method: 8260B Date Collected: 04/02/2013 13:40

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW14C-040213 | Lab Sample ID: 240-22732-5

Matrix: Water | Lab File ID: UXC0572.D

Analysis Method: 8260B | Date Collected: 04/02/2013 15:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 17:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW14C-040213 Lab Sample ID: 240-22732-5

Matrix: Water Lab File ID: UXC0572.D

Analysis Method: 8260B Date Collected: 04/02/2013 15:05

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW14C-040213 | Lab Sample ID: 240-22732-5

Matrix: Water | Lab File ID: UXC0572.D

Analysis Method: 8260B | Date Collected: 04/02/2013 15:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 17:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW14C-040213 Lab Sample ID: 240-22732-5

Matrix: Water Lab File ID: UXC0572.D

Analysis Method: 8260B Date Collected: 04/02/2013 15:05

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 17:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	3.68	1.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: TB-040213 | Lab Sample ID: 240-22732-1

Matrix: WQ | Lab File ID: UXC0568.D

Analysis Method: 8260B | Date Collected: 04/02/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 15:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: TB-040213 Lab Sample ID: 240-22732-1

Matrix: WQ Lab File ID: UXC0568.D

Analysis Method: 8260B Date Collected: 04/02/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 15:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: TB-040213 | Lab Sample ID: 240-22732-1

Matrix: WQ | Lab File ID: UXC0568.D

Analysis Method: 8260B | Date Collected: 04/02/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 15:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: TB-040213 Lab Sample ID: 240-22732-1

Matrix: WQ Lab File ID: UXC0568.D

Analysis Method: 8260B Date Collected: 04/02/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 15:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I-TIC 8260B

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 | Lab Sample ID: 240-22732-2

Matrix: Water | Lab File ID: 0412015.D

Analysis Method: 8270D | Date Collected: 04/02/2013 11:00

Extract. Method: 3520C | Date Extracted: 04/08/2013 09:07

Sample wt/vol: 1030(mL) | Date Analyzed: 04/12/2013 12:01

Con. Extract Vol.: 2(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81647 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	170		4.9	2.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		20-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	45		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	50		21-110
4165-62-2	Phenol-d5 (Surr)	55		21-110
1718-51-0	Terphenyl-d14 (Surr)	44		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12C-040213 | Lab Sample ID: 240-22732-3

Matrix: Water | Lab File ID: 0410022.D

Analysis Method: 8270D | Date Collected: 04/02/2013 12:25

Extract. Method: 3520C | Date Extracted: 04/08/2013 09:07

Sample wt/vol: 1050(mL) | Date Analyzed: 04/10/2013 14:51

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81250 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	47		20-110
367-12-4	2-Fluorophenol (Surr)	45		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	53		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	49		21-110
4165-62-2	Phenol-d5 (Surr)	48		21-110
1718-51-0	Terphenyl-d14 (Surr)	46		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW13A-040213 | Lab Sample ID: 240-22732-4

Matrix: Water | Lab File ID: 0410023.D

Analysis Method: 8270D | Date Collected: 04/02/2013 13:40

Extract. Method: 3520C | Date Extracted: 04/08/2013 09:07

Sample wt/vol: 1000(mL) | Date Analyzed: 04/10/2013 15:13

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81250 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	56		20-110
367-12-4	2-Fluorophenol (Surr)	62		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	64		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	63		21-110
1718-51-0	Terphenyl-d14 (Surr)	46		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW14C-040213 | Lab Sample ID: 240-22732-5

Matrix: Water | Lab File ID: 0410024.D

Analysis Method: 8270D | Date Collected: 04/02/2013 15:05

Extract. Method: 3520C | Date Extracted: 04/08/2013 09:07

Sample wt/vol: 990(mL) | Date Analyzed: 04/10/2013 15:35

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81250 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	68		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	70		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	67		21-110
1718-51-0	Terphenyl-d14 (Surr)	54		24-110

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60A-040213 Lab Sample ID: 240-22732-8

Matrix: Water Lab File ID: 05APR13-perc-027.d

Analysis Method: 6850 Date Collected: 04/02/2013 14:34

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/06/2013 01:51

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Matrix: Water Lab File ID: 05APR13-perc-028.d

Analysis Method: 6850 Date Collected: 04/02/2013 15:44

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/06/2013 02:08

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Matrix: Water Lab File ID: Z0040424.D

Analysis Method: RSK-175 Date Collected: 04/02/2013 15:44

Sample wt/vol: 17(mL) Date Analyzed: 04/04/2013 17:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80546 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	70		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	96		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Matrix: Water Lab File ID: Z0040423.D

Analysis Method: RSK-175 Date Collected: 04/02/2013 12:11

Sample wt/vol: 17(mL) Date Analyzed: 04/04/2013 17:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80546 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	8.0		0.50	0.37
74-84-0	Ethane	0.29	J	0.50	0.10
74-82-8	Methane	450		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	100		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Matrix: Water Lab File ID: Z0040422.D

Analysis Method: RSK-175 Date Collected: 04/02/2013 11:00

Sample wt/vol: 17(mL) Date Analyzed: 04/04/2013 17:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80546 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	1.3		0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	53		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	96		40-122

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-60A-040213 Lab Sample ID: 240-22732-8

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 14:34

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-81A-040213 Lab Sample ID: 240-22732-6

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:07

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW14C-040213 Lab Sample ID: 240-22732-5

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:05

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:44

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 12:11

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:00

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:44

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	4000	5000	130	ug/L	J	B	1	6010C
7439-89-6	Iron	16000	200	81	ug/L			1	6010C
7440-09-7	Potassium	2200	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	5600	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	2000	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	13000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	11000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 12:11

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	110000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	3400	200	81	ug/L			1	6010C
7440-09-7	Potassium	2800	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	1400	5000	34	ug/L	J	B	1	6010C
7439-96-5	Manganese	190	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	100000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	5700	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:00

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	7200	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	33000	200	81	ug/L			1	6010C
7440-09-7	Potassium	1900	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	5800	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	1900	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	9900	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	16000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-60A-040213 Lab Sample ID: 240-22732-8

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 14:34

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	1.8	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	2.2	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	53	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.61	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	70	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	67	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	49	20	4.0	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:44

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.39	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	62	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	66	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	41	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	110	20	4.0	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-81A-040213 Lab Sample ID: 240-22732-6

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:07

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	1.2	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.6	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	120	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	120	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	0.83	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	86	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	66	20	4.0	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 12:11

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	200	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	6.1	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	0.65	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	13	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.23	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	4.5	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	16	20	4.0	ug/L	J	B	1	6020
7439-98-7	Molybdenum	0.97	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	1.2	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:00

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.57	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	69	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.1	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	78	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.48	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	44	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	150	20	4.0	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW14C-040213 Lab Sample ID: 240-22732-5

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:05

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.32	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	59	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.83	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	7.3	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.27	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	5.5	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.36	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	20	20	4.0	ug/L	U		1	6020
7439-98-7	Molybdenum	0.71	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	0.93	20	0.80	ug/L	J		1	6020

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:44

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	57	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	91	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	16	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	2.5	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.041	0.20	0.035	mg/L	J		1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 12:11

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	9.0	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	570	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	390	2.0	0.20	mg/L		B	2	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	14	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.70	0.20	0.035	mg/L			1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:00

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	14	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	120	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	47	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	1.6	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.34	0.50	0.044	mg/L	J		1	300.0
7664-41-7	Ammonia (as N)	0.069	0.20	0.035	mg/L	J		1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW-60B-040213 Lab Sample ID: 240-22732-9

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 15:44

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	0.57	1.0	0.24	mg/L	J		1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW-81B-040213 Lab Sample ID: 240-22732-7

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 12:11

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	1.7	1.0	0.24	mg/L			1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW12A-040213 Lab Sample ID: 240-22732-2

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG ID.:

Matrix: Water Date Sampled: 04/02/2013 11:00

Reporting Basis: WET Date Received: 04/03/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	1.7	1.0	0.24	mg/L			1	9060

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 240-22732-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
HG	UG/L	MRC-MW-81A-040213	240-22732-6	NM	4/2/2013	4/18/2013	4/18/2013	16	0	16
HG	UG/L	MRC-MW-60A-040213	240-22732-8	NM	4/2/2013	4/18/2013	4/18/2013	16	0	16
HG	UG/L	MRC-MW14C-040213	240-22732-5	NM	4/2/2013	4/18/2013	4/18/2013	16	0	16
HG	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
HG	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
M	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/9/2013	4/11/2013	7	2	9
M	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/17/2013	4/18/2013	15	1	16
M	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/9/2013	4/11/2013	7	2	9
M	UG/L	MRC-MW-81A-040213	240-22732-6	NM	4/2/2013	4/17/2013	4/18/2013	15	1	16
M	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/17/2013	4/18/2013	15	1	16
M	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/9/2013	4/11/2013	7	2	9
M	UG/L	MRC-MW-60A-040213	240-22732-8	NM	4/2/2013	4/17/2013	4/18/2013	15	1	16
M	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/17/2013	4/18/2013	15	1	16
M	UG/L	MRC-MW14C-040213	240-22732-5	NM	4/2/2013	4/17/2013	4/18/2013	15	1	16

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/11/2013	4/11/2013	9	0	9
ALK	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/12/2013	4/12/2013	10	0	10
ALK	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/11/2013	4/11/2013	9	0	9
CL	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/13/2013	4/13/2013	11	0	11
CL	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
CL	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
DOC	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/12/2013	4/12/2013	10	0	10
DOC	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/12/2013	4/12/2013	10	0	10
DOC	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/12/2013	4/12/2013	10	0	10
NH3	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
NH3	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
NH3	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
NTA	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
NTA	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
NTA	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
NTI	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
NTI	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
NTI	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OPO4	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
OPO4	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
OPO4	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
PCL	UG/L	MRC-MW-60A-040213	240-22732-8	NM	4/2/2013	4/5/2013	4/6/2013	3	1	4
PCL	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/5/2013	4/6/2013	3	1	4
PCS	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
PCS	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
PCS	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
SO4	MG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
SO4	MG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
SO4	MG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/3/2013	4/3/2013	1	0	1
OS	UG/L	MRC-MW13A-040213	240-22732-4	NM	4/2/2013	4/8/2013	4/10/2013	6	2	8
OS	UG/L	MRC-MW14C-040213	240-22732-5	NM	4/2/2013	4/8/2013	4/10/2013	6	2	8
OS	UG/L	MRC-MW12C-040213	240-22732-3	NM	4/2/2013	4/8/2013	4/10/2013	6	2	8
OS	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/8/2013	4/12/2013	6	4	10
OV	UG/L	TB-040213	240-22732-1	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
OV	UG/L	MRC-MW14C-040213	240-22732-5	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
OV	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
OV	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
OV	UG/L	MRC-MW-60A-040213	240-22732-8	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
OV	UG/L	MRC-MW13A-040213	240-22732-4	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
OV	UG/L	MRC-MW12C-040213	240-22732-3	NM	4/2/2013	4/9/2013	4/9/2013	7	0	7
ETHA	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
ETHA	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
ETHA	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
ETHE	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
ETHE	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
ETHE	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
METH	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
METH	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
METH	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
OVG	UG/L	MRC-MW-60B-040213	240-22732-9	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
OVG	UG/L	MRC-MW12A-040213	240-22732-2	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2
OVG	UG/L	MRC-MW-81B-040213	240-22732-7	NM	4/2/2013	4/4/2013	4/4/2013	2	0	2

Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client: Tetra Tech	Project Manager: Tony Apanavage	Date: 4/2/13	Chain of Custody Number: 114476
Address: 20251 Century Blvd Ste200	Telephone Number (Area Code)/Fax Number: (301) 528-5552	Lab Number:	Page 1 of 1
City: Germantown; State: MD; Zip Code: 20874	Site Contact: Stu Cameron; Lab Contact:		
Project Name and Location (State): MRC GW Sampling MD	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112IC04795-02			

Analysis (Attach list if more space is needed)

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOCs	Total Metals	1,4-Dioxane	Dissolved Gasses	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Mg, Na, SiO2	DOC	Perchlorate	Special Instructions/ Conditions of Receipt
TB-040213	—	—		X						2			X									
MRC-MW12A-040213	4/2/13	1100		X			3	3	2	5			X	X	X	X	X	X	X	X		
MRC-MW12C-040213		1225		X			2			3			X		X							
MRC-MW13A-040213		1340		X			2			3			X		X							
MRC-MW14C-040213		1505		X			2		1	3			X	X	X							
MRC-MW-81A-040213		1107		X					1					X								
MRC-MW-81B-040213		1211		X			1	3	2	5			X	X		X	X	X	X	X		
MRC-MW-60A-040213		1434		X			1		1	3			X	X							X	
MRC-MW-60B-040213		1544		X			2	3	2	5			X	X		X	X	X	X	X	X	

240-22732 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Arch...

...mples are retained

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	4-2-13	1610	1. Received By: [signature]	4/2/13	1610
2. Relinquished By: [signature]	4/2/13	1700	2. Received By: [signature]	4-3-13	900
3. Relinquished By:			3. Received By:		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22732

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 4-3-13 Opened on 4-3-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1 (CF 0°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

IR GUN# 4G (CF +1°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

IR GUN# 5G (CF +1 °C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

IR GUN# 8 (CF +1°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

☐ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
	pH Strip Lot# HC256691		
1100	<2 <2 <2	4-3-13	TLS
1505	<2		
1107	<2		
1211	<2 <2 <2		
1434	<2		
1544	<2 <2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client cooler	2.4	2.4	1	RCB
client cooler	2.2	2.2	1	ICE

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22732-1

Login Number: 22732
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/04/13 01:11 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22732-1

Login Number: 22732
List Number: 1
Creator: Peterson, Erik

List Source: TestAmerica Sacramento
List Creation: 04/04/13 12:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F	MS or MSD exceeds the control limits

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

LCMS

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F	MS or MSD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW SAMPLING MD

Report Number: 240-22732-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury (samples 5, 6, and 8 only for mercury) analysis were performed at the TestAmerica Irvine Laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/03/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.2 and 2.4 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-040213 (240-22732-1), MRC-MW12A-040213 (240-22732-2), MRC-MW12C-040213 (240-22732-3), MRC-MW13A-040213 (240-22732-4), MRC-MW14C-040213 (240-22732-5), MRC-MW-81B-040213 (240-22732-7), MRC-MW-60A-040213 (240-22732-8) and MRC-MW-60B-040213 (240-22732-9) were analyzed for volatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/09/2013.

Samples MRC-MW12A-040213 (240-22732-2)[55.56X], MRC-MW-81B-040213 (240-22732-7)[28.57X], MRC-MW-60A-040213 (240-22732-8)[33.33X] and MRC-MW-60B-040213 (240-22732-9)[166.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW12A-040213 (240-22732-2), MRC-MW12C-040213 (240-22732-3), MRC-MW13A-040213 (240-22732-4) and MRC-MW14C-040213 (240-22732-5) were analyzed for semivolatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/08/2013 and analyzed on 04/10/2013 and 04/12/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Sample MRC-MW12A-040213 (240-22732-2)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/04/2013.

No difficulties were encountered during the dissolved gases analyses. All quality control parameters were within the acceptance limits.

PERCHLORATE
Samples MRC-MW-60A-040213 (240-22732-8) and MRC-MW-60B-040213 (240-22732-9) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/05/2013 and analyzed on 04/06/2013.

No difficulties were encountered during the perchlorate analyses. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/09/2013 and analyzed on 04/11/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-81088/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW14C-040213 (240-22732-5), MRC-MW-81A-040213 (240-22732-6), MRC-MW-81B-040213 (240-22732-7), MRC-MW-60A-040213 (240-22732-8) and MRC-MW-60B-040213 (240-22732-9) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/17/2013 and analyzed on 04/18/2013.

Copper and Zinc were detected in method blank MB 440-98768/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW14C-040213 (240-22732-5), MRC-MW-81A-040213 (240-22732-6), MRC-MW-81B-040213 (240-22732-7), MRC-MW-60A-040213 (240-22732-8) and MRC-MW-60B-040213 (240-22732-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/09/2013 and 04/18/2013.

Mercury failed the recovery criteria low for the MS/MSD of sample 440-43585-2 in batch 440-99223.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 440-98826 were outside control limits for Hg. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 04/04/2013.

No difficulties were encountered during the TDS analyses. All quality control parameters were within the acceptance limits.

ANIONS
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/03/2013.

Orthophosphate as P failed the recovery criteria low for the MS of sample MRC-MW-81B-040213MS (240-22732-7) in batch 240-80405.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ANIONS
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/03/2013 and 04/13/2013.

Chloride was detected in method blank MB 240-81813/10 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW-81B-040213 (240-22732-7)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ALKALINITY
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/11/2013 and 04/12/2013.

No difficulties were encountered during the alkalinity analyses. All quality control parameters were within the acceptance limits.

AMMONIA
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/09/2013.

No difficulties were encountered during the ammonia analyses. All quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON
Samples MRC-MW12A-040213 (240-22732-2), MRC-MW-81B-040213 (240-22732-7) and MRC-MW-60B-040213 (240-22732-9) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/12/2013.

No difficulties were encountered during the TOC analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22732-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
RSK-175	Dissolved Gases (GC)	RSK	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6010C	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL IRV
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9060	Organic Carbon, Dissolved (DOC)	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22732-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22732-1	TB-040213	WQ	04/02/13 00:00	04/03/13 09:00
240-22732-2	MRC-MW12A-040213	Water	04/02/13 11:00	04/03/13 09:00
240-22732-3	MRC-MW12C-040213	Water	04/02/13 12:25	04/03/13 09:00
240-22732-4	MRC-MW13A-040213	Water	04/02/13 13:40	04/03/13 09:00
240-22732-5	MRC-MW14C-040213	Water	04/02/13 15:05	04/03/13 09:00
240-22732-6	MRC-MW-81A-040213	Water	04/02/13 11:07	04/03/13 09:00
240-22732-7	MRC-MW-81B-040213	Water	04/02/13 12:11	04/03/13 09:00
240-22732-8	MRC-MW-60A-040213	Water	04/02/13 14:34	04/03/13 09:00
240-22732-9	MRC-MW-60B-040213	Water	04/02/13 15:44	04/03/13 09:00

Detection Limit Exceptions Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22732-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260B	WQ	2-Butanone	ug/L	5.0	10
8260B	WQ	2-Hexanone	ug/L	5.0	10
8260B	WQ	4-Methyl-2-pentanone	ug/L	5.0	10
8260B	WQ	Acetone	ug/L	5.0	10
8260B	WQ	Diisopropyl ether	ug/L	5.0	10
8260B	WQ	tert-Butyl alcohol	ug/L	20	50

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
~~Acrolein~~	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	~~0.0303~~	0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
~~Acetonitrile~~	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		~~0.0282~~				12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Lin1	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
~~Tetrahydrofuran~~	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	~~0.0478~~							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
~~1,4-Dioxane~~	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	~~0.0028~~							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Lin1	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Lin1	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.9601 0.7242	0.9050	0.8719	0.8759	0.8132	Ave		0.8584				9.5		15.0			
Ethyl ether	0.3412 0.2934	0.3226	0.3378	0.3107	0.3010	Ave		0.3178				6.1		15.0			
3-Chloro-1-propene	0.1577 0.1521	0.1355	0.1441	0.1436	0.1526	Ave		0.1476				5.4		15.0			
Diisopropyl ether	0.2710 0.3092	0.2719	0.2883	0.2894	0.3057	Ave		0.2893				5.6		15.0			
2-Chloro-1,3-butadiene	0.5134 0.5286	0.4490	0.5190	0.5156	0.5192	Ave		0.5075				5.7		15.0			
Ethyl-t-butyl ether (ETBE)	0.5996 0.6507	0.6278	0.6422	0.6520	0.6730	Ave		0.6409				3.9		15.0			
Ethyl acetate	0.1671 0.1520	0.1351	0.1372	0.1445	0.1460	Ave		0.1470				7.9		15.0			
~~Propionitrile~~	0.0279 0.0276	0.0303	0.0278	0.0267	0.0286	Ave		~~0.0282~~				4.4		15.0			
Methacrylonitrile	0.1142 0.1154	0.1292	0.1216	0.1061	0.1151	Ave		0.1169				6.7		15.0			
Is~~obutyl alcohol~~	0.0041 0.0040	0.0039	0.0038	0.0045	0.0043	Ave		~~0.0041~~				6.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4454 0.5069	0.4734	0.4860	0.4960	0.5048	Ave		0.4854				4.8		15.0			
n-Heptane	0.0775 0.0685	0.0576	0.0627	0.0688	0.0669	Ave		0.0670				10.0		15.0			
~~n-Butanol~~	0.0026 0.0025	0.0026	0.0028	0.0029	0.0027	Ave		~~0.0027~~				5.4		15.0			
Methyl methacrylate	0.1572 0.1432	0.1218	0.1256	0.1264	0.1350	Ave		0.1349				9.9		15.0			
~~2-Nitropropane~~	0.0187 0.0239	0.0191	0.0171	0.0186	0.0192	Ave		~~0.0194~~				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0812 0.0946	0.0685	0.0862	0.0895	0.0990	Ave		0.0865				12.0		15.0			
1,2,3-Trimethylbenzene	2.5686 3.4874	2.5916	3.0529	3.0965	3.4820	Ave		3.0465				13.0		15.0			
2-Methylnaphthalene	0.2129 0.6051	0.2387	0.2880	0.4178	0.5799	Qua	-1.627	0.5468	0.0010						0.9970		0.9900
n-Butyl acetate	0.1485 0.2372	0.1744	0.1786	0.2091	0.2206	Lin1	-0.239	0.2320							0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3734		1.00	0.0100	-4.4	50.0
Chloromethane	Ave	0.5133	0.5639	0.1000	1.00	0.0100	9.9	50.0
Vinyl chloride	Ave	0.5765	0.6098		1.00	0.0100	5.8	20.0
Bromomethane	Ave	0.3951	0.3863		1.00	0.0100	-2.2	50.0
Chloroethane	Ave	0.3438	0.3863		1.00	0.0100	12.4	50.0
Trichlorofluoromethane	Ave	0.5693	0.6223		1.00	0.0100	9.3	50.0
Acrolein	Qua		0.0606		20.0	0.0300	48.3	50.0
1,1-Dichloroethene	Ave	0.3445	0.4197		1.00	0.0100	21.8*	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3676		1.00	0.0100	39.7	50.0
Acetone	Qua		0.0747		10.0	0.0200	-0.2	50.0
Iodomethane	Ave	0.4958	0.6219		1.00	0.0100	25.4	50.0
Carbon disulfide	Ave	0.7463	1.004		1.00	0.0100	34.5	50.0
Acetonitrile	Ave	0.0282	0.0333		20.0	0.0300	18.3	50.0
Methyl acetate	Ave	0.1586	0.1827		10.0	0.0100	15.2	50.0
Methylene Chloride	Lin1		0.4258		1.00	0.0100	11.5	50.0
tert-Butyl alcohol	Ave	0.0097	0.0098		50.0	0.200	1.3	50.0
Acrylonitrile	Ave	0.0871	0.0938		20.0	0.0300	7.6	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3791		1.00	0.0100	6.2	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6624		1.00	0.0100	4.9	50.0
Hexane	Ave	0.0668	0.0850		1.00	0.0100	27.3*	20.0
1,1-Dichloroethane	Ave	0.5749	0.6173	0.1000	1.00	0.0100	7.4	50.0
Vinyl acetate	Ave	0.0383	0.0347		2.00	0.0100	-9.4	50.0
2,2-Dichloropropane	Ave	0.2770	0.2681		1.00	0.0100	-3.2	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4011		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0883		10.0	0.0200	-3.0	50.0
Bromochloromethane	Ave	0.1662	0.1613		1.00	0.0100	-3.0	50.0
Tetrahydrofuran	Lin1		0.0486		5.00	0.0100	-3.0	50.0
Chloroform	Ave	0.5671	0.6009		1.00	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4343		1.00	0.0100	5.4	50.0
Cyclohexane	Ave	0.5423	0.6246		1.00	0.0100	15.2	50.0
1,1-Dichloropropene	Ave	0.4381	0.4705		1.00	0.0100	7.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3480		1.00	0.0100	7.3	50.0
Benzene	Ave	1.387	1.441		1.00	0.0100	3.9	50.0
1,2-Dichloroethane	Ave	0.4040	0.4058		1.00	0.0100	0.4	50.0
Trichloroethene	Ave	0.3397	0.3347		1.00	0.0100	-1.5	50.0
Methylcyclohexane	Ave	0.5006	0.5473		1.00	0.0100	9.3	50.0
1,2-Dichloropropane	Ave	0.3010	0.2966		1.00	0.0100	-1.5	20.0
Dibromomethane	Ave	0.1618	0.1715		1.00	0.0100	6.0	50.0
Bromodichloromethane	Ave	0.3013	0.3059		1.00	0.0100	1.5	50.0
2-Chloroethyl vinyl ether	Ave	0.1193	0.1081		10.0	0.0100	-9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.2826		1.00	0.0100	-20.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1608		10.0	0.0200	5.0	50.0
Toluene	Ave	2.028	2.055		1.00	0.0100	1.3	20.0
trans-1,3-Dichloropropene	Lin1		0.3234		1.00	0.0100	-20.9	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3026		1.00	0.0100	-6.4	50.0
Tetrachloroethene	Ave	0.3905	0.3729		1.00	0.0100	-4.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5712		1.00	0.0100	-3.2	50.0
2-Hexanone	Ave	0.1436	0.1562		10.0	0.0200	8.8	50.0
Dibromochloromethane	Lin1		0.2410		1.00	0.0100	-21.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.3045		1.00	0.0100	-0.1	50.0
Chlorobenzene	Ave	1.276	1.287	0.3000	1.00	0.0100	0.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3671		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.7059		1.00	0.0100	5.4	20.0
m-Xylene & p-Xylene	Ave	1.626	1.762		2.00	0.0200	8.3	50.0
o-Xylene	Ave	0.8173	0.9066		1.00	0.0100	10.9	50.0
Styrene	Lin1		1.454		1.00	0.0100	-0.1	50.0
Bromoform	Lin1		0.1234	0.1000	1.00	0.0100	-20.3	50.0
Isopropylbenzene	Ave	1.984	2.244		1.00	0.0100	13.1	50.0
Bromobenzene	Ave	0.9263	0.8726		1.00	0.0100	-5.8	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6194	0.3000	1.00	0.0100	-10.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1915		1.00	0.0100	-13.2	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0862		1.00	0.0200	-7.6	50.0
n-Propylbenzene	Ave	0.9249	0.9564		1.00	0.0100	3.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8704		1.00	0.0100	-1.6	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.869		1.00	0.0100	5.1	50.0
4-Chlorotoluene	Ave	2.918	2.862		1.00	0.0100	-1.9	50.0
tert-Butylbenzene	Ave	2.268	2.336		1.00	0.0100	3.0	50.0
1,2,4-Trimethylbenzene	Ave	2.853	3.027		1.00	0.0100	6.1	50.0
sec-Butylbenzene	Ave	3.298	3.499		1.00	0.0100	6.1	50.0
1,3-Dichlorobenzene	Ave	1.741	1.755		1.00	0.0100	0.8	50.0
p-Isopropyltoluene	Ave	2.821	3.116		1.00	0.0100	10.5	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.709		1.00	0.0100	2.1	50.0
n-Butylbenzene	Ave	2.489	2.779		1.00	0.0100	11.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0607		2.00	0.0100	-11.4	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7228		1.00	0.0100	-4.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4851		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.287		1.00	0.0100	-16.2	50.0
1,2,3-Trichlorobenzene	Ave	0.6565	0.6321		1.00	0.0100	-3.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.3017		0.00858	0.00890	-3.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.667	1.608		0.00858	0.00890	-3.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5350		0.00918	0.00890	3.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3178	0.3272		2.00	0.0100	3.0	50.0
Diisopropyl ether	Ave	0.2893	0.2870		10.0	0.0100	-0.8	50.0
Isobutyl alcohol	Ave	0.0041	0.0047		50.0	0.500	14.7	50.0
Cyclohexanone	Ave	0.0865	0.0130		20.0	0.200	-85.0*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.219		0.0106	0.0100	5.7	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: BFB106A.D BFB Injection Date: 04/09/2013

Instrument ID: A3UX15 BFB Injection Time: 09:53

Analysis Batch No.: 81120

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.0	
75	30.0 - 60.0 % of mass 95	48.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.5	(0.5)1
174	50.0 - 120.00 % of mass 95	92.5	
175	5.0 - 9.0 % of mass 174	6.4	(6.9)1
176	95.0 - 101.0 % of mass 174	90.5	(97.8)1
177	5.0 - 9.0 % of mass 176	5.1	(5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81120/2	UXC0553.D	04/09/2013	10:18
	CCV 240-81120/3	UXC0554.D	04/09/2013	10:40
	LCS 240-81120/4	UXC0555.D	04/09/2013	11:03
	MB 240-81120/5	UXC0557.D	04/09/2013	11:48
TB-040213	240-22732-1	UXC0568.D	04/09/2013	15:57
MRC-MW12A-040213	240-22732-2	UXC0569.D	04/09/2013	16:20
MRC-MW12C-040213	240-22732-3	UXC0570.D	04/09/2013	16:43
MRC-MW13A-040213	240-22732-4	UXC0571.D	04/09/2013	17:06
MRC-MW14C-040213	240-22732-5	UXC0572.D	04/09/2013	17:28
MRC-MW-81B-040213	240-22732-7	UXC0573.D	04/09/2013	17:51
MRC-MW-60A-040213	240-22732-8	UXC0574.D	04/09/2013	18:13
MRC-MW-60B-040213	240-22732-9	UXC0575.D	04/09/2013	18:36
	240-22783-B-2 MS	UXC0578.D	04/09/2013	19:42
	240-22783-B-2 MSD	UXC0579.D	04/09/2013	20:05

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.4443		1.00	0.0100	13.7	50.0
Chloromethane	Ave	0.5133	0.5569	0.1000	1.00	0.0100	8.5	50.0
Vinyl chloride	Ave	0.5765	0.6443		1.00	0.0100	11.8	20.0
Bromomethane	Ave	0.3951	0.4492		1.00	0.0100	13.7	50.0
Chloroethane	Ave	0.3438	0.4113		1.00	0.0100	19.6	50.0
Trichlorofluoromethane	Ave	0.5693	0.5459		1.00	0.0100	-4.1	50.0
Acrolein	Qua		0.0522		20.0	0.100	40.5	50.0
1,1-Dichloroethene	Ave	0.3445	0.4124		1.00	0.0100	19.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3122		1.00	0.0100	18.6	50.0
Acetone	Qua		0.0794		10.0	0.0200	7.1	50.0
Iodomethane	Ave	0.4958	0.6073		1.00	0.0100	22.5	50.0
Carbon disulfide	Ave	0.7463	0.9707		1.00	0.0100	30.1	50.0
Acetonitrile	Ave	0.0282	0.0328		20.0	0.100	16.5	50.0
Methyl acetate	Ave	0.1586	0.1592		10.0	0.0200	0.3	50.0
Methylene Chloride	Lin1		0.4876		1.00	0.0100	29.1	50.0
tert-Butyl alcohol	Ave	0.0097	0.0094		50.0	0.200	-2.4	50.0
Acrylonitrile	Ave	0.0871	0.0984		20.0	0.0200	12.9	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.4026		1.00	0.0100	12.8	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6773		1.00	0.0100	7.3	50.0
Hexane	Ave	0.0668	0.0796		1.00	0.0100	19.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.6212	0.1000	1.00	0.0100	8.1	50.0
Vinyl acetate	Ave	0.0383	0.0338		2.00	0.0100	-11.8	50.0
2,2-Dichloropropane	Ave	0.2770	0.2806		1.00	0.0100	1.3	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4009		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0913		10.0	0.0200	0.3	50.0
Bromochloromethane	Ave	0.1662	0.1784		1.00	0.0100	7.3	50.0
Tetrahydrofuran	Lin1		0.0526		5.00	0.0100	5.3	50.0
Chloroform	Ave	0.5671	0.5980		1.00	0.0100	5.4	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4423		1.00	0.0100	7.4	50.0
Cyclohexane	Ave	0.5423	0.6641		1.00	0.0100	22.5	50.0
1,1-Dichloropropene	Ave	0.4381	0.4574		1.00	0.0100	4.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3342		1.00	0.0100	3.0	50.0
Benzene	Ave	1.387	1.429		1.00	0.0100	3.0	50.0
1,2-Dichloroethane	Ave	0.4040	0.3982		1.00	0.0100	-1.4	50.0
Trichloroethene	Ave	0.3397	0.3372		1.00	0.0100	-0.7	50.0
Methylcyclohexane	Ave	0.5006	0.5884		1.00	0.0100	17.5	50.0
1,2-Dichloropropane	Ave	0.3010	0.3181		1.00	0.0100	5.7	20.0
Dibromomethane	Ave	0.1618	0.1588		1.00	0.0100	-1.8	50.0
1,4-Dioxane	Lin1		0.0020		50.0	0.500	23.8	50.0
Bromodichloromethane	Ave	0.3013	0.2944		1.00	0.0100	-2.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1011		10.0	0.0200	-15.3	50.0
cis-1,3-Dichloropropene	Lin1		0.2773		1.00	0.0100	-22.3	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1629		10.0	0.0200	6.4	50.0
Toluene	Ave	2.028	2.061		1.00	0.0100	1.6	20.0
trans-1,3-Dichloropropene	Lin1		0.2921		1.00	0.0100	-27.9	50.0
Ethyl methacrylate	Lin1		0.3349		1.00	0.0100	-11.5	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3077		1.00	0.0100	-4.8	50.0
Tetrachloroethene	Ave	0.3905	0.3768		1.00	0.0100	-3.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5522		1.00	0.0100	-6.4	50.0
2-Hexanone	Ave	0.1436	0.1498		10.0	0.0200	4.4	50.0
Dibromochloromethane	Lin1		0.2358		1.00	0.0100	-23.2	50.0
1,2-Dibromoethane	Ave	0.3048	0.2968		1.00	0.0100	-2.6	50.0
Chlorobenzene	Ave	1.276	1.254	0.3000	1.00	0.0100	-1.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3685		1.00	0.0100	4.3	50.0
Ethylbenzene	Ave	0.6700	0.7099		1.00	0.0100	6.0	20.0
m-Xylene & p-Xylene	Ave	1.626	1.790		2.00	0.0200	10.1	50.0
o-Xylene	Ave	0.8173	0.9196		1.00	0.0100	12.5	50.0
Styrene	Lin1		1.430		1.00	0.0100	-1.7	50.0
Bromoform	Lin1		0.1183	0.1000	1.00	0.0100	-23.3	50.0
Isopropylbenzene	Ave	1.984	2.250		1.00	0.0100	13.4	50.0
Bromobenzene	Ave	0.9263	0.7965		1.00	0.0100	-14.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6051	0.3000	1.00	0.0100	-12.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1884		1.00	0.0100	-14.6	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0865		1.00	0.0100	12.8	50.0
n-Propylbenzene	Ave	0.9249	0.9024		1.00	0.0100	-2.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8507		1.00	0.0100	-3.8	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.845		1.00	0.0100	4.2	50.0
4-Chlorotoluene	Ave	2.918	2.787		1.00	0.0100	-4.5	50.0
tert-Butylbenzene	Ave	2.268	2.298		1.00	0.0100	1.3	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.909		1.00	0.0100	2.0	50.0
sec-Butylbenzene	Ave	3.298	3.485		1.00	0.0100	5.7	50.0
1,3-Dichlorobenzene	Ave	1.741	1.662		1.00	0.0100	-4.5	50.0
p-Isopropyltoluene	Ave	2.821	2.913		1.00	0.0100	3.3	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.595		1.00	0.0100	-4.7	50.0
n-Butylbenzene	Ave	2.489	2.696		1.00	0.0100	8.3	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0538		2.00	0.0100	-21.4	50.0
1,3,5-Trichlorobenzene	Ave	1.071	1.050		1.00	0.0100	-1.9	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7006		1.00	0.0100	-7.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4850		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.168		1.00	0.0100	-23.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.5537		1.00	0.0100	-15.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2928		0.00833	0.00890	-6.4	50.0
Toluene-d8 (Surr)	Ave	1.667	1.609		0.00859	0.00890	-3.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5606		0.00962	0.00890	8.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCV 240-81120/3 Calibration Date: 04/09/2013 10:40

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0554.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.9457		2.00	0.0100	10.2	50.0
Ethyl ether	Ave	0.3178	0.3112		2.00	0.0100	-2.1	50.0
3-Chloro-1-propene	Ave	0.1476	0.1654		2.00	0.0100	12.1	50.0
Diisopropyl ether	Ave	0.2893	0.3105		10.0	0.0500	7.3	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.5309		2.00	0.0100	4.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6680		5.00	0.0100	4.2	50.0
Ethyl acetate	Ave	0.1470	0.1396		4.00	0.0200	-5.0	50.0
Propionitrile	Ave	0.0282	0.0312		4.00	0.0200	10.7	50.0
Methacrylonitrile	Ave	0.1169	0.1155		2.00	0.0100	-1.2	50.0
Isobutyl alcohol	Ave	0.0041	0.0048		50.0	0.200	16.1	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.4930		5.00	0.0100	1.6	50.0
n-Heptane	Ave	0.0670	0.0680		1.00	0.0100	1.5	50.0
n-Butanol	Ave	0.0027	0.0028		50.0	0.200	4.3	50.0
Methyl methacrylate	Ave	0.1349	0.1214		2.00	0.0100	-10.0	50.0
2-Nitropropane	Ave	0.0194	0.0167		2.00	0.0200	-13.9	50.0
Cyclohexanone	Ave	0.0865	0.0278		20.0	0.100	-67.9*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.350		0.0110	0.0100	10.0	50.0
2-Methylnaphthalene	Qua		0.2012		5.00	0.0200	-49.3	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: UXC0557.D Lab Sample ID: MB 240-81120/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/09/2013 11:48

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81120/4	UXC0555.D	04/09/2013 11:03
TB-040213	240-22732-1	UXC0568.D	04/09/2013 15:57
MRC-MW12A-040213	240-22732-2	UXC0569.D	04/09/2013 16:20
MRC-MW12C-040213	240-22732-3	UXC0570.D	04/09/2013 16:43
MRC-MW13A-040213	240-22732-4	UXC0571.D	04/09/2013 17:06
MRC-MW14C-040213	240-22732-5	UXC0572.D	04/09/2013 17:28
MRC-MW-81B-040213	240-22732-7	UXC0573.D	04/09/2013 17:51
MRC-MW-60A-040213	240-22732-8	UXC0574.D	04/09/2013 18:13
MRC-MW-60B-040213	240-22732-9	UXC0575.D	04/09/2013 18:36
	240-22783-B-2 MS	UXC0578.D	04/09/2013 19:42
	240-22783-B-2 MSD	UXC0579.D	04/09/2013 20:05

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0555.D

Lab ID: LCS 240-81120/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.4	92	43-136	
Benzene	10.0	10.2	102	83-112	
Bromobenzene	10.0	9.26	93	76-115	
Bromochloromethane	10.0	9.68	97	77-120	
Bromodichloromethane	10.0	9.90	99	72-121	
Bromoform	10.0	7.03	70	40-131	
Bromomethane	10.0	7.22	72	11-185	
2-Butanone	20.0	19.2	96	60-126	
Carbon disulfide	10.0	11.4	114	62-142	
Carbon tetrachloride	10.0	9.86	99	66-128	
Chlorobenzene	10.0	9.50	95	85-110	
Chloroethane	10.0	8.48	85	25-153	
2-Chloroethyl vinyl ether	10.0	8.54 J	85	52-131	
Chloroform	10.0	10.4	104	79-117	
Chloromethane	10.0	8.11	81	44-126	
2-Chlorotoluene	10.0	9.79	98	76-116	
4-Chlorotoluene	10.0	9.98	100	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.00	80	61-115	
Dibromochloromethane	10.0	7.54	75	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.38	84	42-136	
1,2-Dibromoethane	10.0	9.42	94	79-113	
Dibromomethane	10.0	10.1	101	81-120	
1,2-Dichlorobenzene	10.0	9.75	97	81-110	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,4-Dichlorobenzene	10.0	9.55	95	82-110	
Dichlorodifluoromethane	10.0	6.54	65	19-129	
1,1-Dichloroethane	10.0	10.5	105	82-115	
1,2-Dichloroethane	10.0	9.94	99	71-127	
1,1-Dichloroethene	10.0	10.9	109	78-131	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichloropropane	10.0	9.49	95	79-116	
2,2-Dichloropropane	10.0	9.31	93	50-129	
1,1-Dichloropropene	10.0	10.3	103	83-114	
Diisopropyl ether	10.0	9.49	95	77-118	
Ethylbenzene	10.0	10.1	101	83-112	
Hexachlorobutadiene	10.0	8.28	83	36-134	
2-Hexanone	20.0	20.2	101	55-133	
Isopropylbenzene	10.0	10.3	103	75-114	
Methylene Chloride	10.0	10.8	108	66-131	
4-Methyl-2-pentanone	20.0	20.2	101	63-128	
Methyl tert-butyl ether	10.0	9.75	98	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0555.D

Lab ID: LCS 240-81120/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.5	102	83-113	
Naphthalene	10.0	7.75	77	32-141	
n-Butylbenzene	10.0	11.1	111	66-125	
n-Propylbenzene	10.0	10.6	106	74-121	
o-Xylene	10.0	10.1	101	83-113	
p-Isopropyltoluene	10.0	11.0	110	74-120	
sec-Butylbenzene	10.0	10.6	106	70-117	
Styrene	10.0	9.36	94	79-114	
tert-Butyl alcohol	200	196	98	70-130	
tert-Butylbenzene	10.0	10.4	104	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.56	96	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.20	92	68-118	
Tetrachloroethene	10.0	9.45	95	79-114	
Toluene	10.0	9.76	98	84-111	
trans-1,2-Dichloroethene	10.0	10.1	101	83-117	
trans-1,3-Dichloropropene	10.0	7.74	77	58-117	
1,2,3-Trichlorobenzene	10.0	8.55	85	54-126	
1,2,4-Trichlorobenzene	10.0	8.74	87	48-135	
1,1,1-Trichloroethane	10.0	9.87	99	74-118	
Trichloroethene	10.0	9.94	99	76-117	
Trichlorofluoromethane	10.0	7.81	78	49-157	
1,2,3-Trichloropropane	10.0	8.94	89	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.8	118	74-151	
1,2,3-Trimethylbenzene	10.0	10.3	103	70-130	
1,2,4-Trimethylbenzene	10.0	10.7	107	76-120	
Vinyl acetate	10.0	7.42	74	46-161	
Vinyl chloride	10.0	8.50	85	53-127	
Xylenes, Total	30.0	30.6	102	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0578.D

Lab ID: 240-22783-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	66.6	17 U	62.3	94	33-145	
Benzene	33.3	3.3 U	33.6	101	72-121	
Bromobenzene	33.3	3.3 U	27.8	83	71-116	
Bromochloromethane	33.3	3.3 U	33.4	100	73-121	
Bromodichloromethane	33.3	3.3 U	31.4	94	67-120	
Bromoform	33.3	3.3 U	24.6	74	32-128	
Bromomethane	33.3	3.3 U	27.2	82	10-186	
2-Butanone	66.6	17 U	66.9	100	54-129	
Carbon disulfide	33.3	3.3 U	35.8	108	57-147	
Carbon tetrachloride	33.3	3.3 U	30.3	91	59-129	
Chlorobenzene	33.3	3.3 U	31.6	95	80-110	
Chloroethane	33.3	3.3 U	31.6	95	21-165	
2-Chloroethyl vinyl ether	33.3	33 U	33 U	0	10-150	F
Chloroform	33.3	3.3 U	33.3	100	76-118	
Chloromethane	33.3	3.3 U	29.3	88	33-132	
2-Chlorotoluene	33.3	3.3 U	29.0	87	69-117	
4-Chlorotoluene	33.3	3.3 U	29.3	88	71-116	
cis-1,2-Dichloroethene	33.3	10	43.4	99	70-120	
cis-1,3-Dichloropropene	33.3	3.3 U	23.0	69	51-110	
Dibromochloromethane	33.3	3.3 U	25.6	77	56-118	
1,2-Dibromo-3-Chloropropane	33.3	17 U	27.8	83	32-139	
1,2-Dibromoethane	33.3	3.3 U	33.4	100	74-113	
Dibromomethane	33.3	3.3 U	34.8	105	77-121	
1,2-Dichlorobenzene	33.3	3.3 U	30.0	90	75-111	
1,3-Dichlorobenzene	33.3	3.3 U	29.6	89	73-110	
1,4-Dichlorobenzene	33.3	3.3 U	28.8	86	75-110	
Dichlorodifluoromethane	33.3	3.3 U	20.1	60	17-128	
1,1-Dichloroethane	33.3	4.9	39.9	105	79-116	
1,2-Dichloroethane	33.3	0.77 J	33.1	97	68-129	
1,1-Dichloroethene	33.3	52	81.8	91	74-135	
1,2-Dichloropropane	33.3	3.3 U	33.1	99	78-115	
1,3-Dichloropropane	33.3	3.3 U	33.8	101	74-118	
2,2-Dichloropropane	33.3	3.3 U	27.5	82	38-127	
1,1-Dichloropropene	33.3	3.3 U	32.5	98	80-114	
Diisopropyl ether	33.3	17 U	30.9	93	73-118	
Ethylbenzene	33.3	3.3 U	33.0	99	75-116	
Hexachlorobutadiene	33.3	3.3 U	23.5	70	27-132	
2-Hexanone	66.6	17 U	72.7	109	47-139	
Isopropylbenzene	33.3	3.3 U	33.6	101	68-116	
Methylene Chloride	33.3	1.4 J	37.4	108	63-128	
4-Methyl-2-pentanone	66.6	17 U	68.5	103	56-131	
Methyl tert-butyl ether	33.3	3.3 U	34.1	102	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0578.D

Lab ID: 240-22783-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	66.6	6.7 U	68.0	102	75-117	
Naphthalene	33.3	3.3 U	24.6	74	15-158	
n-Butylbenzene	33.3	3.3 U	31.9	96	56-127	
n-Propylbenzene	33.3	3.3 U	29.8	90	64-124	
o-Xylene	33.3	3.3 U	34.8	105	76-116	
p-Isopropyltoluene	33.3	3.3 U	31.8	95	64-122	
sec-Butylbenzene	33.3	3.3 U	29.7	89	60-119	
Styrene	33.3	3.3 U	31.2	94	71-117	
tert-Butyl alcohol	666	67 U	700	105	70-130	
tert-Butylbenzene	33.3	3.3 U	30.0	90	61-119	
1,1,1,2-Tetrachloroethane	33.3	3.3 U	32.1	96	64-118	
1,1,2,2-Tetrachloroethane	33.3	3.3 U	29.4	88	63-122	
Tetrachloroethene	33.3	3.3 U	30.7	92	70-117	
Toluene	33.3	3.3 U	32.4	97	78-114	
trans-1,2-Dichloroethene	33.3	3.3 U	33.6	101	80-119	
trans-1,3-Dichloropropene	33.3	3.3 U	25.8	77	46-116	
1,2,3-Trichlorobenzene	33.3	3.3 U	27.8	84	45-129	
1,2,4-Trichlorobenzene	33.3	3.3 U	26.0	78	38-138	
1,1,1-Trichloroethane	33.3	3.3 U	32.6	98	68-121	
Trichloroethene	33.3	86	114	83	66-120	
Trichlorofluoromethane	33.3	3.3 U	26.7	80	46-157	
1,2,3-Trichloropropane	33.3	3.3 U	29.6	89	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	33.3	3.3 U	36.6	110	70-152	
1,2,3-Trimethylbenzene	33.3	17 U	31.4	94	70-130	
1,2,4-Trimethylbenzene	33.3	3.3 U	30.8	93	67-124	
Vinyl acetate	33.3	6.7 U	25.1	75	43-157	
Vinyl chloride	33.3	3.3 U	30.3	91	49-130	
Xylenes, Total	99.9	6.7 U	103	103	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0579.D

Lab ID: 240-22783-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	66.6	63.9	96	3	30	33-145	
Benzene	33.3	33.7	101	0	30	72-121	
Bromobenzene	33.3	29.4	88	6	30	71-116	
Bromochloromethane	33.3	31.9	96	5	30	73-121	
Bromodichloromethane	33.3	32.9	99	5	30	67-120	
Bromoform	33.3	25.2	76	2	30	32-128	
Bromomethane	33.3	26.4	79	3	30	10-186	
2-Butanone	66.6	65.1	98	3	30	54-129	
Carbon disulfide	33.3	37.4	112	4	30	57-147	
Carbon tetrachloride	33.3	31.5	95	4	30	59-129	
Chlorobenzene	33.3	31.7	95	0	30	80-110	
Chloroethane	33.3	31.0	93	2	30	21-165	
2-Chloroethyl vinyl ether	33.3	33 U	0	NC	30	10-150	F
Chloroform	33.3	34.9	105	5	30	76-118	
Chloromethane	33.3	28.6	86	3	30	33-132	
2-Chlorotoluene	33.3	30.0	90	3	30	69-117	
4-Chlorotoluene	33.3	30.6	92	5	30	71-116	
cis-1,2-Dichloroethene	33.3	43.1	98	1	30	70-120	
cis-1,3-Dichloropropene	33.3	25.9	78	12	30	51-110	
Dibromochloromethane	33.3	26.2	79	2	30	56-118	
1,2-Dibromo-3-Chloropropane	33.3	28.9	87	4	30	32-139	
1,2-Dibromoethane	33.3	31.9	96	5	30	74-113	
Dibromomethane	33.3	34.5	104	1	30	77-121	
1,2-Dichlorobenzene	33.3	31.9	96	6	30	75-111	
1,3-Dichlorobenzene	33.3	31.0	93	5	30	73-110	
1,4-Dichlorobenzene	33.3	30.5	92	6	30	75-110	
Dichlorodifluoromethane	33.3	21.2	64	5	30	17-128	
1,1-Dichloroethane	33.3	39.5	104	1	30	79-116	
1,2-Dichloroethane	33.3	34.3	101	3	30	68-129	
1,1-Dichloroethene	33.3	80.6	87	1	30	74-135	
1,2-Dichloropropane	33.3	34.3	103	4	30	78-115	
1,3-Dichloropropane	33.3	32.5	97	4	30	74-118	
2,2-Dichloropropane	33.3	28.0	84	2	30	38-127	
1,1-Dichloropropene	33.3	33.2	100	2	30	80-114	
Diisopropyl ether	33.3	32.1	96	4	30	73-118	
Ethylbenzene	33.3	31.9	96	3	30	75-116	
Hexachlorobutadiene	33.3	24.1	72	3	30	27-132	
2-Hexanone	66.6	75.5	113	4	30	47-139	
Isopropylbenzene	33.3	33.4	100	0	30	68-116	
Methylene Chloride	33.3	38.4	111	3	30	63-128	
4-Methyl-2-pentanone	66.6	72.3	109	5	30	56-131	
Methyl tert-butyl ether	33.3	33.4	100	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0579.D

Lab ID: 240-22783-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	66.6	66.4	100	2	30	75-117	
Naphthalene	33.3	26.7	80	8	30	15-158	
n-Butylbenzene	33.3	32.1	97	1	30	56-127	
n-Propylbenzene	33.3	30.6	92	3	30	64-124	
o-Xylene	33.3	33.1	99	5	30	76-116	
p-Isopropyltoluene	33.3	32.3	97	2	30	64-122	
sec-Butylbenzene	33.3	31.3	94	5	30	60-119	
Styrene	33.3	31.0	93	1	30	71-117	
tert-Butyl alcohol	666	719	108	3	30	70-130	
tert-Butylbenzene	33.3	31.7	95	5	30	61-119	
1,1,1,2-Tetrachloroethane	33.3	32.1	96	0	30	64-118	
1,1,2,2-Tetrachloroethane	33.3	32.1	96	9	30	63-122	
Tetrachloroethene	33.3	31.2	94	2	30	70-117	
Toluene	33.3	32.6	98	1	30	78-114	
trans-1,2-Dichloroethene	33.3	32.9	99	2	30	80-119	
trans-1,3-Dichloropropene	33.3	26.7	80	4	30	46-116	
1,2,3-Trichlorobenzene	33.3	29.5	89	6	30	45-129	
1,2,4-Trichlorobenzene	33.3	27.4	82	5	30	38-138	
1,1,1-Trichloroethane	33.3	32.7	98	0	30	68-121	
Trichloroethene	33.3	114	82	0	30	66-120	
Trichlorofluoromethane	33.3	29.0	87	8	30	46-157	
1,2,3-Trichloropropane	33.3	30.8	92	4	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	33.3	35.9	108	2	30	70-152	
1,2,3-Trimethylbenzene	33.3	32.1	97	2	30	70-130	
1,2,4-Trimethylbenzene	33.3	32.0	96	4	30	67-124	
Vinyl acetate	33.3	26.8	80	6	30	43-157	
Vinyl chloride	33.3	29.3	88	3	30	49-130	
Xylenes, Total	99.9	99.5	100	3	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-040213	240-22732-1	90	103	89	86
MRC-MW12A-040213	240-22732-2	93	106	93	87
MRC-MW12C-040213	240-22732-3	91	109	87	86
MRC-MW13A-040213	240-22732-4	90	104	92	88
MRC-MW14C-040213	240-22732-5	94	109	88	90
MRC-MW-81B-040213	240-22732-7	89	104	88	79
MRC-MW-60A-040213	240-22732-8	96	106	91	88
MRC-MW-60B-040213	240-22732-9	85	103	87	84
	MB 240-81120/5	88	98	86	82
	LCS 240-81120/4	94	97	96	104
	240-22783-B-2 MS	90	95	98	107
	240-22783-B-2 MSD	96	97	94	104

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-81120/2		1300981	4.66	869004	7.30	586844	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: CCVIS 240-81120/2 Date Analyzed: 04/09/2013 10:18

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0553.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1300981	4.66	869004	7.30	586844	9.51
UPPER LIMIT		2601962	5.16	1738008	7.80	1173688	10.01
LOWER LIMIT		650491	4.16	434502	6.80	293422	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-81120/3		1323357	4.66	881467	7.30	458162	9.51
LCS 240-81120/4		1462215	4.66	998379	7.30	589209	9.51
MB 240-81120/5		1320818	4.66	958837	7.30	433080	9.51
240-22732-1	TB-040213	1237247	4.67	824406	7.30	390938	9.51
240-22732-2	MRC-MW12A-040213	1259952	4.66	855041	7.30	401176	9.51
240-22732-3	MRC-MW12C-040213	1234795	4.67	849927	7.30	410644	9.51
240-22732-4	MRC-MW13A-040213	1277197	4.66	839346	7.30	392777	9.51
240-22732-5	MRC-MW14C-040213	1204747	4.67	808085	7.30	388741	9.51
240-22732-7	MRC-MW-81B-040213	1294041	4.67	862417	7.30	409574	9.51
240-22732-8	MRC-MW-60A-040213	1164202	4.66	783026	7.30	391698	9.51
240-22732-9	MRC-MW-60B-040213	1252656	4.67	881168	7.30	408026	9.51
240-22783-B-2 MS		1338454	4.66	848563	7.30	573880	9.51
240-22783-B-2 MSD		1371477	4.66	918783	7.30	583312	9.51

FB = Fluorobenzene
FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4
Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: 0402001.D DFTPP Injection Date: 04/02/2013

Instrument ID: A4AG2 DFTPP Injection Time: 12:23

Analysis Batch No.: 80256

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	33.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	39.8	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	54.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	24.4	
365	Greater than 0.75% of mass 198	3.0	
441	Present, but less than mass 443	11.3	
442	40.0 - 110.0% of mass 198	81.9	
443	15.0 - 24.0% of mass 442	16.5	(20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-80256/10	0402010.D	04/02/2013	15:37
	STD8 240-80256/11	0402011.D	04/02/2013	15:59
	STD7 240-80256/12	0402012.D	04/02/2013	16:20
	STD6 240-80256/13	0402013.D	04/02/2013	16:42
	STD5 240-80256/14	0402014.D	04/02/2013	17:04
	STD4 240-80256/15	0402015.D	04/02/2013	17:25
	STD3 240-80256/16	0402016.D	04/02/2013	17:47
	STD2 240-80256/17	0402017.D	04/02/2013	18:09
	STD1 240-80256/18	0402018.D	04/02/2013	18:30
	ICV 240-80256/19	0402019.D	04/02/2013	18:52

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80256

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 15:37 Calibration End Date: 04/02/2013 18:30 Calibration ID: 14347

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80256/18	0402018.D
Level 2	STD2 240-80256/17	0402017.D
Level 3	STD3 240-80256/16	0402016.D
Level 4	STD4 240-80256/15	0402015.D
Level 5	STD5 240-80256/14	0402014.D
Level 6	STD6 240-80256/13	0402013.D
Level 7	STD7 240-80256/12	0402012.D
Level 8	STD8 240-80256/11	0402011.D
Level 9	STD9 240-80256/10	0402010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4626	0.5947 0.4586	0.5418 0.4905	0.5104 0.4924	0.4518	Ave		0.5004				9.7		20.0			
N-Nitrosodimethylamine	0.6313	0.4990 0.6556	0.5985 0.7034	0.5905 0.6926	0.6182	Ave		0.6236				10.0		20.0			
Pyridine	1.1465	1.0018 1.1644	1.1053 1.2576	1.1543 1.2317	1.1242	Ave		1.1482				6.8		20.0			
Benzaldehyde	+++++ 0.9722	0.9399 0.9750	0.9910 1.0327	0.9986 0.9821	0.9975	Ave		0.9861			0.0100	2.7		20.0			
Phenol	1.4822	1.4876 1.5181	1.5297 1.6234	1.4911 1.5742	1.5147	Ave		1.5276			0.8000	3.2		20.0			
Aniline	1.9109	1.8808 1.9330	1.9101 2.0658	1.9156 2.0213	1.9062	Ave		1.9430				3.3		20.0			
Bis(2-chloroethyl)ether	1.2043	1.2155 1.2283	1.2180 1.3036	1.2254 1.2422	1.2263	Ave		1.2329			0.7000	2.5		20.0			
2-Chlorophenol	1.2321	1.1390 1.2499	1.2188 1.3507	1.2090 1.3177	1.2499	Ave		1.2459			0.8000	5.2		20.0			
1,3-Dichlorobenzene	1.3162	1.3059 1.3417	1.3655 1.4444	1.3436 1.4021	1.3328	Ave		1.3565				3.4		20.0			
1,4-Dichlorobenzene	1.3208	1.3775 1.3502	1.3771 1.4508	1.3656 1.4261	1.3560	Ave		1.3780				3.0		20.0			
Benzyl alcohol	0.7892	0.7191 0.8193	0.7447 0.8808	0.8073 0.8399	0.8005	Ave		0.8001				6.4		20.0			
1,2-Dichlorobenzene	1.2832	1.2935 1.2775	1.3126 1.3845	1.3293 1.3475	1.2793	Ave		1.3134				2.9		20.0			
2-Methylphenol	1.1241	1.0812 1.1532	1.1252 1.2421	1.1212 1.1898	1.1584	Ave		1.1494			0.7000	4.3		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-80256/19 Calibration Date: 04/02/2013 18:52

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0402019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4791		9.58	10.0	-4.2	30.0
N-Nitrosodimethylamine	Ave	0.6236	0.6482		10.4	10.0	3.9	30.0
Pyridine	Ave	1.148	1.229		10.7	10.0	7.1	30.0
Benzaldehyde	Ave	0.9861	1.013	0.0100	20.6	20.0	2.8	30.0
Phenol	Ave	1.528	1.615	0.8000	10.6	10.0	5.7	30.0
Aniline	Ave	1.943	2.017		10.4	10.0	3.8	30.0
Bis(2-chloroethyl)ether	Ave	1.233	1.265	0.7000	10.3	10.0	2.6	30.0
2-Chlorophenol	Ave	1.246	1.317	0.8000	10.6	10.0	5.7	30.0
1,3-Dichlorobenzene	Ave	1.357	1.411		10.4	10.0	4.0	30.0
1,4-Dichlorobenzene	Ave	1.378	1.456		10.6	10.0	5.7	30.0
Benzyl alcohol	Ave	0.8001	0.8654		10.8	10.0	8.2	30.0
1,2-Dichlorobenzene	Ave	1.313	1.369		10.4	10.0	4.2	30.0
2-Methylphenol	Ave	1.149	1.246	0.7000	10.8	10.0	8.4	30.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.279		7.42	7.20	3.0	30.0
Indene	Ave	2.172	2.288		21.1	20.0	5.4	30.0
3 & 4 Methylphenol	Ave	1.201	1.280		10.7	10.0	6.6	30.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.9049	0.5000	10.7	10.0	7.2	30.0
Acetophenone	Ave	1.689	1.774	0.0100	10.5	10.0	5.0	30.0
Hexachloroethane	Ave	0.5369	0.5770	0.3000	10.7	10.0	7.5	30.0
Nitrobenzene	Ave	0.3193	0.3415	0.2000	10.7	10.0	7.0	30.0
Isophorone	Ave	0.5793	0.6528	0.4000	11.3	10.0	12.7	30.0
2-Nitrophenol	Ave	0.1527	0.1711	0.1000	11.2	10.0	12.1	30.0
2,4-Dimethylphenol	Ave	0.3096	0.3211	0.2000	10.4	10.0	3.7	30.0
Benzoic acid	Qua		0.1825		23.4	20.0	16.8	30.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3832	0.3000	10.3	10.0	3.1	30.0
2,4-Dichlorophenol	Ave	0.2434	0.2633	0.2000	10.8	10.0	8.2	30.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2842		10.5	10.0	5.0	30.0
Naphthalene	Ave	0.9352	0.9825	0.7000	10.5	10.0	5.0	30.0
4-Chloroaniline	Ave	0.3945	0.4147	0.0100	10.5	10.0	5.1	30.0
Hexachlorobutadiene	Ave	0.1430	0.1490	0.0100	10.4	10.0	4.2	30.0
Caprolactam	Ave	0.0866	0.0988	0.0100	22.8	20.0	14.2	30.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2931	0.2000	11.1	10.0	11.0	30.0
2-Methylnaphthalene	Ave	0.6265	0.6516	0.4000	10.4	10.0	4.0	30.0
1-Methylnaphthalene	Ave	0.5852	0.6108		10.4	10.0	4.4	30.0
Hexachlorocyclopentadiene	Linl		0.2716	0.0500	10.1	10.0	0.6	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4812	0.0100	10.5	10.0	5.4	30.0
2,4,6-Trichlorophenol	Ave	0.2852	0.3273	0.2000	11.5	10.0	14.8	30.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3440	0.2000	11.3	10.0	12.5	30.0
1,1'-Biphenyl	Ave	1.319	1.403	0.0100	10.6	10.0	6.3	30.0
2-Chloronaphthalene	Ave	0.9699	1.026	0.8000	10.6	10.0	5.7	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: 0410001.D DFTPP Injection Date: 04/10/2013

Instrument ID: A4AG2 DFTPP Injection Time: 07:14

Analysis Batch No.: 81250

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	34.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	41.0	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	53.9	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	23.2	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	9.6	
442	40.0 - 110.0% of mass 198	66.1	
443	15.0 - 24.0% of mass 442	13.4	(20.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-81250/2	0410002.D	04/10/2013	07:31
	MB 240-80935/22-A	0410003.D	04/10/2013	07:53
	LCS 240-80935/23-A	0410004.D	04/10/2013	08:14
MRC-MW12C-040213	240-22732-3	0410022.D	04/10/2013	14:51
MRC-MW13A-040213	240-22732-4	0410023.D	04/10/2013	15:13
MRC-MW14C-040213	240-22732-5	0410024.D	04/10/2013	15:35

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: STD6 240-81250/2 Calibration Date: 04/10/2013 07:31

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0410002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4718		9.43	10.0	-5.7	20.0
N-Nitrosodimethylamine	Ave	0.6236	0.6415		10.3	10.0	2.9	20.0
Pyridine	Ave	1.148	1.191		10.4	10.0	3.7	20.0
Benzaldehyde	Ave	0.9861	0.9299	0.0100	18.9	20.0	-5.7	20.0
Phenol	Ave	1.528	1.476	0.8000	9.66	10.0	-3.4	20.0
Aniline	Ave	1.943	1.836		9.45	10.0	-5.5	20.0
Bis(2-chloroethyl)ether	Ave	1.233	1.142	0.7000	9.26	10.0	-7.4	20.0
2-Chlorophenol	Ave	1.246	1.223	0.8000	9.81	10.0	-1.9	20.0
1,3-Dichlorobenzene	Ave	1.357	1.332		9.82	10.0	-1.8	20.0
1,4-Dichlorobenzene	Ave	1.378	1.329		9.64	10.0	-3.6	20.0
Benzyl alcohol	Ave	0.8001	0.7454		9.32	10.0	-6.8	20.0
1,2-Dichlorobenzene	Ave	1.313	1.271		9.68	10.0	-3.2	20.0
2-Methylphenol	Ave	1.149	1.129	0.7000	9.82	10.0	-1.8	20.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.106		8.90	10.0	-11.0	20.0
Indene	Ave	2.172	2.100		19.3	20.0	-3.3	20.0
3 & 4 Methylphenol	Ave	1.201	1.136		9.46	10.0	-5.4	20.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.7618	0.5000	9.02	10.0	-9.8	20.0
Acetophenone	Ave	1.689	1.606	0.0100	9.50	10.0	-5.0	20.0
Hexachloroethane	Ave	0.5369	0.5295	0.3000	9.86	10.0	-1.4	20.0
Nitrobenzene	Ave	0.3193	0.3082	0.2000	9.65	10.0	-3.5	20.0
Isophorone	Ave	0.5793	0.5314	0.4000	9.17	10.0	-8.3	20.0
2-Nitrophenol	Ave	0.1527	0.1654	0.1000	10.8	10.0	8.4	20.0
2,4-Dimethylphenol	Ave	0.3096	0.2962	0.2000	9.57	10.0	-4.3	20.0
Benzoic acid	Qua		0.1700		22.2	20.0	11.1	20.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3463	0.3000	9.31	10.0	-6.9	20.0
2,4-Dichlorophenol	Ave	0.2434	0.2479	0.2000	10.2	10.0	1.8	20.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2756		10.2	10.0	1.8	20.0
Naphthalene	Ave	0.9352	0.8997	0.7000	9.62	10.0	-3.8	20.0
4-Chloroaniline	Ave	0.3945	0.3897	0.0100	9.88	10.0	-1.2	20.0
Hexachlorobutadiene	Ave	0.1430	0.1424	0.0100	9.96	10.0	-0.4	20.0
Caprolactam	Ave	0.0866	0.0958	0.0100	22.1	20.0	10.7	20.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2548	0.2000	9.65	10.0	-3.5	20.0
2-Methylnaphthalene	Ave	0.6265	0.5959	0.4000	9.51	10.0	-4.9	20.0
1-Methylnaphthalene	Ave	0.5852	0.5549		9.48	10.0	-5.2	20.0
Hexachlorocyclopentadiene	Linl		0.2526	0.0500	9.38	10.0	-6.2	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4613	0.0100	10.1	10.0	1.0	20.0
2,4,6-Trichlorophenol	Ave	0.2852	0.3015	0.2000	10.6	10.0	5.7	20.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3151	0.2000	10.3	10.0	3.1	20.0
1,1'-Biphenyl	Ave	1.319	1.266	0.0100	9.59	10.0	-4.1	20.0
2-Chloronaphthalene	Ave	0.9699	0.9674	0.8000	9.97	10.0	-0.3	20.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: 0412001.D DFTPP Injection Date: 04/12/2013

Instrument ID: A4AG2 DFTPP Injection Time: 07:01

Analysis Batch No.: 81647

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.1	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.6	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	25.0 - 75.0% of mass 198	56.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.5	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	9.9	
442	40.0 - 110.0% of mass 198	67.0	
443	15.0 - 24.0% of mass 442	13.5	(20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-81647/2	0412002.D	04/12/2013	07:17
MRC-MW12A-040213	240-22732-2	0412015.D	04/12/2013	12:01

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: STD6 240-81647/2 Calibration Date: 04/12/2013 07:17

Instrument ID: A4AG2 Calib Start Date: 04/02/2013 15:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/02/2013 18:30

Lab File ID: 0412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5004	0.4655		9.30	10.0	-7.0	20.0
N-Nitrosodimethylamine	Ave	0.6236	0.6119		9.81	10.0	-1.9	20.0
Pyridine	Ave	1.148	1.110		9.67	10.0	-3.3	20.0
Benzaldehyde	Ave	0.9861	0.9484	0.0100	19.2	20.0	-3.8	20.0
Phenol	Ave	1.528	1.506	0.8000	9.86	10.0	-1.4	20.0
Aniline	Ave	1.943	1.859		9.57	10.0	-4.3	20.0
Bis(2-chloroethyl)ether	Ave	1.233	1.185	0.7000	9.61	10.0	-3.9	20.0
2-Chlorophenol	Ave	1.246	1.245	0.8000	9.99	10.0	-0.0	20.0
1,3-Dichlorobenzene	Ave	1.357	1.323		9.75	10.0	-2.5	20.0
1,4-Dichlorobenzene	Ave	1.378	1.362		9.88	10.0	-1.2	20.0
Benzyl alcohol	Ave	0.8001	0.7838		9.80	10.0	-2.0	20.0
1,2-Dichlorobenzene	Ave	1.313	1.276		9.72	10.0	-2.8	20.0
2-Methylphenol	Ave	1.149	1.110	0.7000	9.65	10.0	-3.5	20.0
bis (2-chloroisopropyl) ether	Ave	1.242	1.178		9.49	10.0	-5.1	20.0
Indene	Ave	2.172	2.136		19.7	20.0	-1.7	20.0
3 & 4 Methylphenol	Ave	1.201	1.172		9.76	10.0	-2.4	20.0
N-Nitrosodi-n-propylamine	Ave	0.8444	0.8083	0.5000	9.57	10.0	-4.3	20.0
Acetophenone	Ave	1.689	1.654	0.0100	9.79	10.0	-2.1	20.0
Hexachloroethane	Ave	0.5369	0.5427	0.3000	10.1	10.0	1.1	20.0
Nitrobenzene	Ave	0.3193	0.3119	0.2000	9.77	10.0	-2.3	20.0
Isophorone	Ave	0.5793	0.5576	0.4000	9.63	10.0	-3.7	20.0
2-Nitrophenol	Ave	0.1527	0.1620	0.1000	10.6	10.0	6.1	20.0
2,4-Dimethylphenol	Ave	0.3096	0.2966	0.2000	9.58	10.0	-4.2	20.0
Benzoic acid	Qua		0.1724		22.4	20.0	12.2	20.0
Bis(2-chloroethoxy)methane	Ave	0.3718	0.3583	0.3000	9.64	10.0	-3.6	20.0
2,4-Dichlorophenol	Ave	0.2434	0.2477	0.2000	10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.2707	0.2711		10.0	10.0	0.2	20.0
Naphthalene	Ave	0.9352	0.9181	0.7000	9.82	10.0	-1.8	20.0
4-Chloroaniline	Ave	0.3945	0.3921	0.0100	9.94	10.0	-0.6	20.0
Hexachlorobutadiene	Ave	0.1430	0.1418	0.0100	9.92	10.0	-0.8	20.0
Caprolactam	Ave	0.0866	0.0975	0.0100	22.5	20.0	12.6	20.0
4-Chloro-3-methylphenol	Ave	0.2640	0.2613	0.2000	9.90	10.0	-1.0	20.0
2-Methylnaphthalene	Ave	0.6265	0.6002	0.4000	9.58	10.0	-4.2	20.0
1-Methylnaphthalene	Ave	0.5852	0.5658		9.67	10.0	-3.3	20.0
Hexachlorocyclopentadiene	Linl		0.2365	0.0500	8.81	10.0	-11.9	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4566	0.4467	0.0100	9.78	10.0	-2.2	20.0
2,4,6-Trichlorophenol	Ave	0.2852	0.2954	0.2000	10.4	10.0	3.6	20.0
2,4,5-Trichlorophenol	Ave	0.3057	0.3098	0.2000	10.1	10.0	1.3	20.0
1,1'-Biphenyl	Ave	1.319	1.254	0.0100	9.50	10.0	-5.0	20.0
2-Chloronaphthalene	Ave	0.9699	0.9457	0.8000	9.75	10.0	-2.5	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab File ID: 0410003.D Lab Sample ID: MB 240-80935/22-A

Matrix: Water Date Extracted: 04/08/2013 09:07

Instrument ID: A4AG2 Date Analyzed: 04/10/2013 07:53

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-80935/23-A	0410004.D	04/10/2013 08:14
MRC-MW12C-040213	240-22732-3	0410022.D	04/10/2013 14:51
MRC-MW13A-040213	240-22732-4	0410023.D	04/10/2013 15:13
MRC-MW14C-040213	240-22732-5	0410024.D	04/10/2013 15:35
MRC-MW12A-040213	240-22732-2	0412015.D	04/12/2013 12:01

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-80935/22-A

Matrix: Water | Lab File ID: 0410003.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/08/2013 09:07

Sample wt/vol: 1000(mL) | Date Analyzed: 04/10/2013 07:53

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81250 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		20-110
367-12-4	2-Fluorophenol (Surr)	68		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	68		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	68		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0410004.D

Lab ID: LCS 240-80935/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.0	60	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW12A-040213	240-22732-2	57	55	50	52	45	44
MRC-MW12C-040213	240-22732-3	45	48	49	47	53	46
MRC-MW13A-040213	240-22732-4	62	63	61	56	64	46
MRC-MW14C-040213	240-22732-5	68	67	66	61	70	54
	MB 240-80935/22-A	68	68	66	60	68	57
	LCS 240-80935/23-A	77	77	77	71	84	57

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD6 240-80256/13 Date Analyzed: 04/02/2013 16:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0402013.D Heated Purge: (Y/N) N

Calibration ID: 14347

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		275675	5.95	1051353	7.07	595336	8.56
UPPER LIMIT		551350	6.45	2102706	7.57	1190672	9.06
LOWER LIMIT		137838	5.45	525677	6.57	297668	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80256/19		282466	5.95	1110982	7.07	634290	8.56
STD6 240-81250/2 CCVIS		253169	5.94	968304	7.06	541160	8.56
STD6 240-81647/2 CCVIS		229525	5.93	893687	7.05	519299	8.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD6 240-80256/13 Date Analyzed: 04/02/2013 16:42

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0402013.D Heated Purge: (Y/N) N

Calibration ID: 14347

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1027373	9.83	1071893	12.40	891992	14.50
UPPER LIMIT		2054746	10.33	2143786	12.90	1783984	15.00
LOWER LIMIT		513687	9.33	535947	11.90	445996	14.00
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80256/19		1062456	9.83	1134298	12.40	957021	14.50
STD6 240-81250/2 CCVIS		912012	9.82	939625	12.39	806171	14.48
STD6 240-81647/2 CCVIS		854970	9.81	883755	12.37	760874	14.45

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD6 240-81250/2 Date Analyzed: 04/10/2013 07:31

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0410002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		253169	5.94	968304	7.06	541160	8.56
UPPER LIMIT		506338	6.44	1936608	7.56	1082320	9.06
LOWER LIMIT		126585	5.44	484152	6.56	270580	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-80935/22-A		217507	5.94	850905	7.06	497085	8.56
LCS 240-80935/23-A		203461	5.94	778069	7.06	463400	8.56
240-22732-3	MRC-MW12C-040213	305577	5.94	1170892	7.06	691373	8.56
240-22732-4	MRC-MW13A-040213	266424	5.94	1016480	7.06	608609	8.55
240-22732-5	MRC-MW14C-040213	223723	5.94	853848	7.06	506237	8.55

DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
NPT = Naphthalene-d8
Area Limit = 50%-200% of internal standard area
ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT
ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD6 240-81250/2 Date Analyzed: 04/10/2013 07:31

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0410002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		912012	9.82	939625	12.39	806171	14.48
UPPER LIMIT		1824024	10.32	1879250	12.89	1612342	14.98
LOWER LIMIT		456006	9.32	469813	11.89	403086	13.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-80935/22-A		832216	9.82	848175	12.39	744494	14.47
LCS 240-80935/23-A		781957	9.82	796666	12.39	682760	14.47
240-22732-3	MRC-MW12C-040213	1188763	9.82	1212201	12.39	1049158	14.47
240-22732-4	MRC-MW13A-040213	1044565	9.82	1054442	12.38	907731	14.47
240-22732-5	MRC-MW14C-040213	878725	9.82	878177	12.38	760591	14.47

PHN = Phenanthrene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-d12
CRY = Chrysene-d12
Area Limit = 50%-200% of internal standard area
PRY = Perylene-d12
RT Limit = ± 0.5 minutes of internal standard RT
PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD6 240-81647/2 Date Analyzed: 04/12/2013 07:17

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0412002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		229525	5.93	893687	7.05	519299	8.54
UPPER LIMIT		459050	6.43	1787374	7.55	1038598	9.04
LOWER LIMIT		114763	5.43	446844	6.55	259650	8.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22732-2	MRC-MW12A-040213	224523	5.93	885074	7.05	524518	8.54

DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
NPT = Naphthalene-d8
Area Limit = 50%-200% of internal standard area
ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT
ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: STD6 240-81647/2 Date Analyzed: 04/12/2013 07:17

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0412002.D Heated Purge: (Y/N) N

Calibration ID: 14351

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		854970	9.81	883755	12.37	760874	14.45
UPPER LIMIT		1709940	10.31	1767510	12.87	1521748	14.95
LOWER LIMIT		427485	9.31	441878	11.87	380437	13.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22732-2	MRC-MW12A-040213	896660	9.81	889857	12.37	754389	14.45

PHN = Phenanthrene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-d12
CRY = Chrysene-d12
Area Limit = 50%-200% of internal standard area
PRY = Perylene-d12
RT Limit = ± 0.5 minutes of internal standard RT
PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

6850

Perchlorate by LC/MS or LC/MS/MS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Instrument ID: A5 Start Date: 04/05/2013 19:16

Analysis Batch Number: 13757 End Date: 04/06/2013 09:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/05/2013 19:16	1		Anion HR 4.6(mm)
ICB 320-13757/2		04/05/2013 19:32	1	05APR13-perc-004.d	Anion HR 4.6(mm)
STD02 320-13757/3 IC		04/05/2013 19:49	1	05APR13-perc-005.d	Anion HR 4.6(mm)
STD03 320-13757/4 IC		04/05/2013 20:05	1	05APR13-perc-006.d	Anion HR 4.6(mm)
STD04 320-13757/5 ICISAV		04/05/2013 20:22	1	05APR13-perc-007.d	Anion HR 4.6(mm)
STD05 320-13757/6 IC		04/05/2013 20:38	1	05APR13-perc-008.d	Anion HR 4.6(mm)
STD06 320-13757/7 IC		04/05/2013 20:55	1	05APR13-perc-009.d	Anion HR 4.6(mm)
STD07 320-13757/8 IC		04/05/2013 21:11	1	05APR13-perc-010.d	Anion HR 4.6(mm)
STD08 320-13757/9 IC		04/05/2013 21:28	1	05APR13-perc-011.d	Anion HR 4.6(mm)
CCB 320-13757/10		04/05/2013 21:44	1	05APR13-perc-012.d	Anion HR 4.6(mm)
ICV 320-13757/11		04/05/2013 22:01	1	05APR13-perc-013.d	Anion HR 4.6(mm)
LODV 320-13757/12 CCV		04/05/2013 22:17	1	05APR13-perc-014.d	Anion HR 4.6(mm)
MB 320-13752/1-A		04/05/2013 22:34	1	05APR13-perc-015.d	Anion HR 4.6(mm)
LCS 320-13752/2-A		04/05/2013 22:50	1	05APR13-perc-016.d	Anion HR 4.6(mm)
INF 320-13752/3-A		04/05/2013 23:06	1	05APR13-perc-017.d	Anion HR 4.6(mm)
ZZZZZ		04/05/2013 23:23	1		Anion HR 4.6(mm)
ZZZZZ		04/05/2013 23:39	1		Anion HR 4.6(mm)
ZZZZZ		04/05/2013 23:56	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 00:12	1		Anion HR 4.6(mm)
720-48853-D-16-B MS		04/06/2013 00:29	1	05APR13-perc-022.d	Anion HR 4.6(mm)
720-48853-D-16-C MSD		04/06/2013 00:45	1	05APR13-perc-023.d	Anion HR 4.6(mm)
ZZZZZ		04/06/2013 01:02	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 01:18	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 01:35	1		Anion HR 4.6(mm)
240-22732-8	MRC-MW-60A-040213	04/06/2013 01:51	1	05APR13-perc-027.d	Anion HR 4.6(mm)
240-22732-9	MRC-MW-60B-040213	04/06/2013 02:08	1	05APR13-perc-028.d	Anion HR 4.6(mm)
CCVL 320-13757/27		04/06/2013 02:24	1	05APR13-perc-029.d	Anion HR 4.6(mm)
CCV 320-13757/28		04/06/2013 02:40	1	05APR13-perc-030.d	Anion HR 4.6(mm)
CCB 320-13757/29		04/06/2013 02:57	1	05APR13-perc-031.d	Anion HR 4.6(mm)
ZZZZZ		04/06/2013 03:13	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 03:30	1		Anion HR 4.6(mm)
INF 320-13745/3-A		04/06/2013 03:46	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:03	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:19	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:36	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 04:52	1		Anion HR 4.6(mm)

6850

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Instrument ID: A5 Start Date: 04/05/2013 19:16

Analysis Batch Number: 13757 End Date: 04/06/2013 09:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/06/2013 05:09	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 05:25	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 05:42	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 05:58	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 06:14	1		Anion HR 4.6(mm)
CCV 320-13757/42		04/06/2013 06:31	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 06:47	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:04	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:20	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:37	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 07:53	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:10	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:26	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:43	1		Anion HR 4.6(mm)
ZZZZZ		04/06/2013 08:59	1		Anion HR 4.6(mm)
CCVL 320-13757/52		04/06/2013 09:16	1		Anion HR 4.6(mm)
CCV 320-13757/53		04/06/2013 09:32	1		Anion HR 4.6(mm)
CCB 320-13757/54		04/06/2013 09:49	1		Anion HR 4.6(mm)

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1 Analy Batch No.: 13757

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/05/2013 19:49 Calibration End Date: 04/05/2013 21:28 Calibration ID: 2535

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD02 320-13757/3	05APR13-perc-005.d
Level 2	STD03 320-13757/4	05APR13-perc-006.d
Level 3	STD04 320-13757/5	05APR13-perc-007.d
Level 4	STD05 320-13757/6	05APR13-perc-008.d
Level 5	STD06 320-13757/7	05APR13-perc-009.d
Level 6	STD07 320-13757/8	05APR13-perc-010.d
Level 7	STD08 320-13757/9	05APR13-perc-011.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7922 0.8002	0.7876 0.8203	0.7562	0.7645	0.7738	Ave		0.7850				2.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1 Analy Batch No.: 13757

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/05/2013 19:49 Calibration End Date: 04/05/2013 21:28 Calibration ID: 2535

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD02 320-13757/3	05APR13-perc-005.d
Level 2	STD03 320-13757/4	05APR13-perc-006.d
Level 3	STD04 320-13757/5	05APR13-perc-007.d
Level 4	STD05 320-13757/6	05APR13-perc-008.d
Level 5	STD06 320-13757/7	05APR13-perc-009.d
Level 6	STD07 320-13757/8	05APR13-perc-010.d
Level 7	STD08 320-13757/9	05APR13-perc-011.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perchlorate	18OP	Ave	3786081 110231517	5877051 204193353	11608094	22978001	60281647	0.300 10.0	0.500 20.0	1.00	2.00	5.00

Curve Type Legend:
Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 320-13757/11 Calibration Date: 04/05/2013 22:01

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-013.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.7847		5.00	5.00	-0.0	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Lab Sample ID: LODV 320-13757/12 Calibration Date: 04/05/2013 22:17

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.8190		0.157	0.150	4.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVL 320-13757/27 Calibration Date: 04/06/2013 02:24

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-029.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.7828		0.499	0.500	-0.3	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCV 320-13757/28 Calibration Date: 04/06/2013 02:40

Instrument ID: A5 Calib Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/05/2013 21:28

Lab File ID: 05APR13-perc-030.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7850	0.7661		1.95	2.00	-2.4	15.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-13757/2

Matrix: Water Lab File ID: 05APR13-perc-004.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/05/2013 19:32

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13757/10

Matrix: Water Lab File ID: 05APR13-perc-012.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/05/2013 21:44

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-13757/29

Matrix: Water Lab File ID: 05APR13-perc-031.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/06/2013 02:57

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Lab File ID: 05APR13-perc-015.d Lab Sample ID: MB 320-13752/1-A

Matrix: Water Date Extracted: 04/05/2013 16:00

Instrument ID: A5 Date Analyzed: 04/05/2013 22:34

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-13752/2-A	05APR13-perc-016.d	04/05/2013 22:50
	720-48853-D-16-B MS	05APR13-perc-022.d	04/06/2013 00:29
	720-48853-D-16-C MSD	05APR13-perc-023.d	04/06/2013 00:45
MRC-MW-60A-040213	240-22732-8	05APR13-perc-027.d	04/06/2013 01:51
MRC-MW-60B-040213	240-22732-9	05APR13-perc-028.d	04/06/2013 02:08

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-13752/1-A

Matrix: Water Lab File ID: 05APR13-perc-015.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 04/05/2013 16:00

Sample wt/vol: 4.00(mL) Date Analyzed: 04/05/2013 22:34

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 13757 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-016.d

Lab ID: LCS 320-13752/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	4.78	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-022.d

Lab ID: 720-48853-D-16-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.50 U	5.11	102	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-023.d

Lab ID: 720-48853-D-16-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	5.01	100	2	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 05APR13-perc-017.d

Lab ID: INF 320-13752/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	5.00	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22732-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/05/2013 19:49

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/05/2013 21:28

Calibration ID: 2535

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		147305654	10.00				
UPPER LIMIT		220958481	11.00				
LOWER LIMIT		73652827	9.00				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-13757/10		160995048	10.01				
ICV 320-13757/11		161301539	10.00				
LODV 320-13757/12 CCV		160709209	10.00				
MB 320-13752/1-A		152034932	10.00				
LCS 320-13752/2-A		147261694	10.00				
INF 320-13752/3-A		144775563	9.93				
720-48853-D-16-B MS		116473945	9.58				
720-48853-D-16-C MSD		119321160	9.55				
240-22732-8	MRC-MW-60A-040213	155021944	9.97				
240-22732-9	MRC-MW-60B-040213	155749021	9.98				
CCVL 320-13757/27		161978952	9.98				
CCV 320-13757/28		162228127	9.98				
CCB 320-13757/29		151963734	10.00				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909		0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392		1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489		1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655		1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512		3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705		3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319		5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657			2.572 - 2.772	2.699

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Ave	38438 11934310	123659 81376315	406582 36666789	1209668 159521463	3969261	0.251 116	0.965 772	3.86 347	11.6 1543	38.6
Ethene	Ave	42640 18928943	178527 128474180	602389 57345534	1803144 247666290	6346457	0.440 203	1.69 1355	6.78 610	20.3 2710	67.8
Acetylene	Ave	10063 5189958	41670 40355973	142717 16648752	430060 77009812	1642953	0.408 188	1.57 1254	6.27 564	18.8 2508	62.7
Ethane	Ave	47848 22508675	203442 153167226	696560 68933291	2103657 300072325	7472670	0.472 218	1.81 1452	7.26 653	21.8 2903	72.6
Propene	Ave	52126 27266136	224438 185584124	758081 82393900	2265818 357727706	9132788	0.660 305	2.54 2030	10.2 914	30.5 4060	102
Propane	Ave	63821 34014805	279391 231733482	964752 104277738	2915538 454872922	11246033	0.691 319	2.66 2127	10.6 957	31.9 4253	106
Propane, 2-methyl	Ave	76200 45765053	333875 311308529	1215789 140338679	3674766 613077945	15084964	0.911 420	3.50 2802	14.0 1261	42.0 5604	140
1,1,1-Trifluoroethane	Ave	2054100 367330855	8954283	36585949 500284541	121933404	249161727	65.8 9114	253	1013 12152	3038	6076

Curve Type Legend:
Ave = Average

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Sample No.: CCVRT 240-80546/3 Date Analyzed: 04/04/2013 13:22

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0040403.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.70		
UPPER LIMIT				2.75		
LOWER LIMIT				2.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-80546/3		04/04/2013 13:22	Z0040403.D	2.70		
LCS 240-80546/4		04/04/2013 13:35	Z0040404.D	2.70		
MB 240-80546/5		04/04/2013 13:47	Z0040405.D	2.70		
CCV 240-80546/12		04/04/2013 15:12	Z0040412.D	2.70		
240-22726-L-1 MS		04/04/2013 15:37	Z0040414.D	2.71		
240-22726-L-1 MSD		04/04/2013 15:49	Z0040415.D	2.71		
240-22732-2	MRC-MW12A-040213	04/04/2013 17:15	Z0040422.D	2.70		
240-22732-7	MRC-MW-81B-040213	04/04/2013 17:27	Z0040423.D	2.70		
240-22732-9	MRC-MW-60B-040213	04/04/2013 17:39	Z0040424.D	2.70		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVRT 240-80546/3 Calibration Date: 04/04/2013 13:22

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040403.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	102367		105	116	-8.9	30.0
Ethene	Ave	94091	94782		205	203	0.7	30.0
Acetylene	Ave	27012	33840		236	188	25.3	30.0
Ethane	Ave	102982	99490		210	218	-3.4	30.0
Propene	Ave	85073	84406		302	305	-0.8	30.0
Propane	Ave	101861	96400		302	319	-5.4	30.0
Propane, 2-methyl	Ave	100175	94352		396	420	-5.8	30.0
1,1,1-Trifluoroethane	Ave	37902	43014		2760	2440	13.5	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVRT 240-80546/3 Calibration Date: 04/04/2013 13:22

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040403.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.70	2.60	2.80

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCV 240-80546/12 Calibration Date: 04/04/2013 15:12

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040412.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	99799		103	116	-11.2	30.0
Ethene	Ave	94091	86941		188	203	-7.6	30.0
Acetylene	Ave	27012	27677		193	188	2.5	30.0
Ethane	Ave	102982	96170		203	218	-6.6	30.0
Propene	Ave	85073	76885		275	305	-9.6	30.0
Propane	Ave	101861	93904		294	319	-7.8	30.0
Propane, 2-methyl	Ave	100175	92762		389	420	-7.4	30.0
1,1,1-Trifluoroethane	Ave	37902	39125		2510	2440	3.2	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCV 240-80546/12 Calibration Date: 04/04/2013 15:12

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040412.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.70	2.60	2.80

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: MB 240-80546/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0040405.D Lab File ID:(2)

Date Analyzed:(1) 04/04/2013 13:47 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-80546/4	04/04/2013 13:35	
	240-22726-L-1 MS	04/04/2013 15:37	
	240-22726-L-1 MSD	04/04/2013 15:49	
MRC-MW12A-040213	240-22732-2	04/04/2013 17:15	
MRC-MW-81B-040213	240-22732-7	04/04/2013 17:27	
MRC-MW-60B-040213	240-22732-9	04/04/2013 17:39	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80546/5

Matrix: Water Lab File ID: Z0040405.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 04/04/2013 13:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80546 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.50	U	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	113		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040404.D

Lab ID: LCS 240-80546/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	216	106	64-130	
Ethane	218	223	102	77-127	
Methane	116	108	93	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040414.D

Lab ID: 240-22726-L-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	203	0.50 U	167	82	51-129	
Ethane	218	3.7	184	83	59-133	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040415.D

Lab ID: 240-22726-L-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	203	171	84	2	34	51-129	
Ethane	218	188	85	2	34	59-133	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW12A-040213	240-22732-2	96
MRC-MW-81B-040213	240-22732-7	100
MRC-MW-60B-040213	240-22732-9	96
	MB 240-80546/5	113
	LCS 240-80546/4	113
	240-22726-L-1 MS	90
	240-22726-L-1 MSD	89

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22732-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW12A-040213	240-22732-2
MRC-MW14C-040213	240-22732-5
MRC-MW-81A-040213	240-22732-6
MRC-MW-81B-040213	240-22732-7
MRC-MW-60A-040213	240-22732-8
MRC-MW-60B-040213	240-22732-9

Comments:

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW12A-040213	240-22732-2
MRC-MW-81B-040213	240-22732-7
MRC-MW-60B-040213	240-22732-9

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/09/2013 10:31 End Date: 04/09/2013 15:43

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-80949/1-A			10:31	X
IC 240-80949/2-A			10:34	X
IC 240-80949/3-A			10:35	X
IC 240-80949/4-A			10:37	X
IC 240-80949/5-A			10:38	X
IC 240-80949/6-A			10:40	X
ICV 240-80949/7-A	1		10:41	X
ICB 240-80949/8-A	1		10:42	X
CRA 240-80949/9-A	1		10:44	X
CCVL 240-80949/10-A	1		10:45	X
CCB 240-80949/11-A			10:47	
ZZZZZZ			10:48	
ZZZZZZ			10:49	
ZZZZZZ			10:51	
ZZZZZZ			10:53	
ZZZZZZ			10:55	
ZZZZZZ			10:57	
ZZZZZZ			10:58	
ZZZZZZ			10:59	
ZZZZZZ			11:01	
ZZZZZZ			11:02	
CCV 240-80949/12-A			11:03	
CCB 240-80949/11-A			11:05	
ZZZZZZ			11:06	
ZZZZZZ			11:08	
ZZZZZZ			11:10	
ZZZZZZ			11:12	
ZZZZZZ			11:13	
ZZZZZZ			11:14	
ZZZZZZ			11:16	
ZZZZZZ			11:18	
ZZZZZZ			11:20	
ZZZZZZ			11:21	
CCV 240-80949/12-A			11:23	
CCB 240-80949/11-A			11:24	
ZZZZZZ			11:26	
ZZZZZZ			11:27	
ZZZZZZ			11:29	
ZZZZZZ			11:30	
ZZZZZZ			11:31	
ZZZZZZ			11:33	
ZZZZZZ			11:34	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/09/2013 10:31 End Date: 04/09/2013 15:43

Lab Sample Id	D/F	Type	Time	Analytes: Hg
ZZZZZZ			13:15	
ZZZZZZ			13:16	
CRA 240-80949/9-A			13:21	
CCV 240-80949/12-A	1		13:22	X
CCB 240-80949/11-A	1		13:24	X
MB 240-81101/1-A	1	T	14:57	X
LCS 240-81101/2-A	1	T	14:59	X
ZZZZZZ			15:01	
240-22693-E-2-B MS	1	T	15:02	X
240-22693-E-2-C MSD	1	T	15:04	X
ZZZZZZ			15:05	
CCV 240-80949/12-A	1		15:07	X
CCB 240-80949/11-A	1		15:08	X
ZZZZZZ			15:10	
ZZZZZZ			15:12	
ZZZZZZ			15:13	
ZZZZZZ			15:15	
ZZZZZZ			15:16	
ZZZZZZ			15:17	
ZZZZZZ			15:19	
ZZZZZZ			15:20	
240-22732-2	1	T	15:22	X
240-22732-7	1	T	15:24	X
CCV 240-80949/12-A	1		15:25	X
CCB 240-80949/11-A	1		15:27	X
240-22732-9	1	T	15:28	X
ZZZZZZ			15:30	
ZZZZZZ			15:31	
ZZZZZZ			15:33	
ZZZZZZ			15:35	
ZZZZZZ			15:36	
ZZZZZZ			15:38	
ZZZZZZ			15:39	
CCV 240-80949/12-A	1		15:41	X
CCB 240-80949/11-A	1		15:43	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00349

Analyte	ICV 240-80949/7-A 04/09/2013 10:41				CCVL 240-80949/10-A 04/09/2013 10:45				CCV 240-80949/12-A 04/09/2013 13:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.41		2.50	96	5.02		5.00	100	5.17		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00349

Analyte	CCV 240-80949/12-A 04/09/2013 15:07				CCV 240-80949/12-A 04/09/2013 15:25				CCV 240-80949/12-A 04/09/2013 15:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.14		5.00	103	5.26		5.00	105	5.27		5.00	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Method: 7470A Instrument ID: H1

Lab Sample ID: CRA 240-80949/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00349

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.186	J	93	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-80949/8-A 04/09/2013 10:42		CCB 240-80949/11-A 04/09/2013 13:24		CCB 240-80949/11-A 04/09/2013 15:08		CCB 240-80949/11-A 04/09/2013 15:27	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-80949/11-A 04/09/2013 15:43							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-81101/1-A	04/09/2013 12:20	81101		100	100
LCS 240-81101/2-A	04/09/2013 12:20	81101		100	100
240-22693-E-2-B MS	04/09/2013 12:20	81101		100	100
240-22693-E-2-C MSD	04/09/2013 12:20	81101		100	100
240-22732-2	04/09/2013 12:20	81101		100	100
240-22732-7	04/09/2013 12:20	81101		100	100
240-22732-9	04/09/2013 12:20	81101		100	100

FORM XII-IN

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-81101/1-A

Instrument Code: H1 Batch No.: 81255

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-81101/2-A

Lab Name: TestAmerica Canton Job No.: 240-22732-1

Sample Matrix: Water LCS Source: MTHGCALW_00350

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.08		102	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22693-E-2-B MS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.09		0.20	U	1.00	109	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22693-E-2-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.06		1.00	106	69-134	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/18/2013 14:28 End Date: 04/18/2013 17:23

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-99103/6-A	1		14:28	X
IC 440-99103/7-A	1		14:30	X
IC 440-99103/8-A	1		14:33	X
IC 440-99103/9-A	1		14:35	X
IC 440-99103/10-A	1		14:38	X
IC 440-99103/11-A	1		14:40	X
ICV 440-99103/1-A	1		14:43	X
ICB 440-99103/2-A	1		14:45	X
CRA 440-99103/5-A	1		14:48	X
CCV 440-99103/3-A	1		15:08	X
CCB 440-99103/4-A	1		15:11	X
MB 440-98826/1-A	1	T	15:13	X
LCS 440-98826/2-A	1	T	15:16	X
ZZZZZZ			15:18	
440-43585-D-2-C MS	1	T	15:21	X
440-43585-D-2-D MSD	1	T	15:23	X
ZZZZZZ			15:26	
CCV 440-99103/3-A	1		15:28	X
CCB 440-99103/4-A	1		15:31	X
ZZZZZZ			15:33	
240-22732-5	1	T	15:36	X
240-22732-6	1	T	15:38	X
240-22732-8	1	T	15:41	X
ZZZZZZ			15:43	
ZZZZZZ			15:46	
ZZZZZZ			15:48	
ZZZZZZ			15:51	
ZZZZZZ			15:53	
CCV 440-99103/3-A	1		15:56	X
CCB 440-99103/4-A	1		15:58	X
ZZZZZZ			16:01	
ZZZZZZ			16:03	
ZZZZZZ			16:06	
ZZZZZZ			16:08	
ZZZZZZ			16:11	
ZZZZZZ			16:14	
ZZZZZZ			16:16	
ZZZZZZ			16:19	
ZZZZZZ			16:21	
CCV 440-99103/3-A			16:24	
CCB 440-99103/4-A			16:26	
CRA 440-99103/5-A			16:29	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/18/2013 14:28 End Date: 04/18/2013 17:23

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			17:00	
ZZZZZZ			17:02	
ZZZZZZ			17:05	
ZZZZZZ			17:07	
ZZZZZZ			17:10	
ZZZZZZ			17:12	
ZZZZZZ			17:15	
CCV 440-99103/3-A			17:18	
CCB 440-99103/4-A			17:20	
CRA 440-99103/5-A	1		17:23	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	ICV 440-99103/1-A 04/18/2013 14:43				CCV 440-99103/3-A 04/18/2013 15:08				CCV 440-99103/3-A 04/18/2013 15:28			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.73		8.00	97	4.19		4.00	105	4.16		4.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	CCV 440-99103/3-A 04/18/2013 15:56											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.20		4.00	105								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99103/2-A 04/18/2013 14:45		CCB 440-99103/4-A 04/18/2013 15:11		CCB 440-99103/4-A 04/18/2013 15:31		CCB 440-99103/4-A 04/18/2013 15:58	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98826/1-A	04/18/2013 11:42	98826		20	20
LCS 440-98826/2-A	04/18/2013 11:42	98826		20	20
440-43585-D-2-C MS	04/18/2013 11:42	98826		20	20
440-43585-D-2-D MSD	04/18/2013 11:42	98826		20	20
240-22732-5	04/18/2013 11:42	98826		20	20
240-22732-6	04/18/2013 11:42	98826		20	20
240-22732-8	04/18/2013 11:42	98826		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98826/1-A

Instrument Code: CV-HG3 Batch No.: 99223

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-98826/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00077

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.54		107	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-43585-D-2-C MS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	3.85		0.20	U	8.00	48	70-130	F	7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-43585-D-2-D MSD

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	3.30		8.00	41	70-130	15	20	F	7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-99103/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.103	J	51	50-150

Lab Sample ID: CRA 440-99103/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.187	J	93	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22732-1

SDG No.:

Instrument ID: H1 Date: 04/01/2011 10:45

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes						
				Ca	Fe	K	Mg	Mn	Na	SiO2
ICIS 240-81543/1	1		06:59	X	X	X	X	X	X	X
CALSTD 240-81543/2 IC			07:03	X	X	X	X	X	X	X
CALSTD 240-81543/3 IC			07:08	X	X	X	X	X	X	X
ICV 240-81543/4	1		07:12	X	X	X	X	X	X	X
ICB 240-81543/5	1		07:15	X	X	X	X	X	X	X
CRI 240-81543/6			07:19							
ZZZZZZ			07:23							
ICSA 240-81543/8	1		07:27	X	X	X	X	X	X	
ICSAB 240-81543/9	1		07:31	X	X	X	X	X	X	
CCV 240-81543/10			07:35							
CCB 240-81543/11			07:39							
ZZZZZZ			07:43							
ZZZZZZ			07:47							
ZZZZZZ			07:51							
ZZZZZZ			07:55							
ZZZZZZ			07:58							
ZZZZZZ			08:02							
CCV 240-81543/18	1		08:06	X	X	X	X	X	X	
CCB 240-81543/19	1		08:10	X	X	X	X	X	X	
CCV 240-81543/20	1		08:52							X
CCB 240-81543/21	1		08:56							X
ZZZZZZ			09:00							
CRI 240-81543/23	1		09:18	X	X	X	X	X	X	
MB 240-81088/1-A	1	R	09:22	X	X	X	X	X	X	X
LCS 240-81088/2-A	1	R	09:26	X	X	X	X	X	X	X
240-22732-7	1	R	09:29	X	X	X	X	X	X	X
240-22732-7 SD	5	R	09:33	X	X	X	X	X	X	X
ZZZZZZ			09:37							
CCV 240-81543/29	1		09:41							X
CCV 240-81543/30	1		09:45	X	X	X	X	X	X	
CCB 240-81543/31	1		09:49	X	X	X	X	X	X	X
240-22732-7 MS	1	R	09:53	X	X	X	X	X	X	X
240-22732-7 MSD	1	R	09:57	X	X	X	X	X	X	X
ZZZZZZ			10:01							
240-22732-2	1	R	10:05	X	X	X	X	X	X	X
240-22732-9	1	R	10:09	X	X	X	X	X	X	X
ZZZZZZ			10:13							
CRI 240-81543/38	1		10:16							X
CRI 240-81543/39	1		10:20	X	X	X	X	X	X	
ZZZZZZ			10:24							

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes							
				Ca	Fe	K	Mg	Mn	Na	SiO2	
ZZZZZZ			10:28								
CCV 240-81543/42	1		10:32	X	X	X	X	X	X		
CCB 240-81543/43	1		10:35	X	X	X	X	X	X		
CCV 240-81543/44	1		10:39							X	
CCB 240-81543/45	1		10:46							X	
ZZZZZZ			10:50								
ZZZZZZ			10:54								
ZZZZZZ			10:58								
ZZZZZZ			11:01								
ZZZZZZ			11:05								
ZZZZZZ			11:09								
EMPTY 240-81543/52			11:14								
CCV 240-81543/53			11:21								
CCV 240-81543/54			11:25								
CCB 240-81543/55			11:29								
ZZZZZZ			11:33								
ZZZZZZ			11:37								
ZZZZZZ			11:41								
ZZZZZZ			11:45								
ZZZZZZ			11:55								
ZZZZZZ			11:59								
ZZZZZZ			12:03								
ZZZZZZ			12:07								
ZZZZZZ			12:11								
ZZZZZZ			12:15								
CCV 240-81543/66			12:19								
CCB 240-81543/67			12:23								
ZZZZZZ			12:27								
ZZZZZZ			12:31								
ZZZZZZ			12:35								
ZZZZZZ			12:39								
ZZZZZZ			12:43								
ZZZZZZ			12:47								
ZZZZZZ			12:51								
ZZZZZZ			12:55								
ZZZZZZ			12:59								
ZZZZZZ			13:03								
CCV 240-81543/78			13:08								
CCB 240-81543/79			13:11								
ZZZZZZ			13:15								

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-81543/4 04/11/2013 07:12				CCV 240-81543/18 04/11/2013 08:06				CCV 240-81543/30 04/11/2013 09:45			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25500		25000	102	51800		50000	104	52300		50000	105
Iron	12600		12500	101	24700		25000	99	25000		25000	100
Magnesium	24900		25000	100	50400		50000	101	51100		50000	102
Manganese	1510		1500	101	1910		2000	95	1930		2000	96
Potassium	24700		25000	99	49800		50000	100	50100		50000	100
Sodium	24900		25000	100	49900		50000	100	50200		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	CCV 240-81543/42 04/11/2013 10:32											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	52700		50000	105								
Iron	25100		25000	100								
Magnesium	51700		50000	103								
Manganese	1930		2000	96								
Potassium	50300		50000	101								
Sodium	50300		50000	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MTSiCCV_00001

Analyte	ICV 240-81543/4 04/11/2013 07:12				CCV 240-81543/20 04/11/2013 08:52				CCV 240-81543/29 04/11/2013 09:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	6920		6420	108	11100		10700	104	10900		10700	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MTSiCCV_00001

Analyte	CCV 240-81543/44 04/11/2013 10:39											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	10900		10700	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-81543/5 04/11/2013 07:15		CCB 240-81543/19 04/11/2013 08:10		CCB 240-81543/21 04/11/2013 08:56		CCB 240-81543/31 04/11/2013 09:49	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U			5000	U
Iron	200	200	U	200	U			200	U
Magnesium	5000	5000	U	5000	U			5000	U
Manganese	15	15	U	15	U			15	U
Potassium	5000	5000	U	5000	U			5000	U
SiO2, Silica	1100	1100	U			1100	U	1100	U
Sodium	5000	5000	U	5000	U			5000	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-81543/43 04/11/2013 10:35		CCB 240-81543/45 04/11/2013 10:46					
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U						
Iron	200	200	U						
Magnesium	5000	5000	U						
Manganese	15	15	U						
Potassium	5000	5000	U						
SiO2, Silica	1100			1100	U				
Sodium	5000	5000	U						

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-81088/1-A	04/09/2013 08:09	81088		50	50
LCS 240-81088/2-A	04/09/2013 08:09	81088		50	50
240-22732-7	04/09/2013 08:09	81088		50	50
240-22732-7 MS	04/09/2013 08:09	81088		50	50
240-22732-7 MSD	04/09/2013 08:09	81088		50	50
240-22732-2	04/09/2013 08:09	81088		50	50
240-22732-9	04/09/2013 08:09	81088		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-81088/1-A

Instrument Code: I9 Batch No.: 81543

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	206	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	43.0	J		6010C
7439-96-5	Manganese	0.631	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-81088/2-A

Lab Name: TestAmerica Canton Job No.: 240-22732-1

Sample Matrix: Water LCS Source: MTICP2A_00025

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	49900		100	80	120		6010C
Iron	1000	984		98	80	120		6010C
Potassium	50000	47800		96	80	120		6010C
Magnesium	50000	48700		97	80	120		6010C
Manganese	500	470		94	80	120		6010C
Sodium	50000	48000		96	80	120		6010C
SiO2, Silica	2140	2250		105	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICSA 240-81543/8 Instrument ID: I9

Lab File ID: I9041113A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Calcium	**500000**	**488130**	**98**
Iron	**200000**	**189670**	**95**
Magnesium	**500000**	**503100**	**101**
Manganese		**2.84**	
Potassium		**-83.2**	
Sodium		**45.5**	
Aluminum	*500000*	*517120*	*103*
Antimony		*-2.48*	
Arsenic		*-1.91*	
Barium		*0.0885*	
Beryllium		*-0.458*	
Boron		*1.25*	
Cadmium		*1.10*	
Chromium		*2.91*	
Cobalt		*-1.63*	
Copper		*0.359*	
Lead		*-0.411*	
Lithium		*-45.9*	
Molybdenum		*-2.04*	
Nickel		*-0.271*	
Selenium		*3.14*	
Silicon		*-20.3*	
Silver		*0.106*	
Strontium		*7.14*	
Thallium		*-0.113*	
Tin		*7.39*	
Titanium		*-0.641*	
Vanadium		*-2.55*	
Zinc		*10.1*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICSAB 240-81543/9 Instrument ID: I9

Lab File ID: I9041113A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**479310**	**96**
Iron	**200000**	**187750**	**94**
Magnesium	**500000**	**496570**	**99**
Manganese	**500**	**483**	**97**
Potassium	**10000**	**10110**	**101**
Sodium	**10000**	**10296**	**103**
Aluminum	*500000*	*507590*	*102*
Antimony	*1000*	*996*	*100*
Arsenic	*1000*	*1008*	*101*
Barium	*500*	*491*	*98*
Beryllium	*500*	*493*	*99*
Boron	*500*	*504*	*101*
Cadmium	*1000*	*1002*	*100*
Chromium	*500*	*474*	*95*
Cobalt	*500*	*479*	*96*
Copper	*500*	*515*	*103*
Lead	*1000*	*894*	*89*
Lithium	*500*	*476*	*95*
Molybdenum	*1000*	*966*	*97*
Nickel	*1000*	*952*	*95*
Selenium	*1000*	*1006*	*101*
Silicon	*10000*	*9807*	*98*
Silver	*1000*	*1074*	*107*
Strontium	*1500*	*1441*	*96*
Thallium	*1000*	*938*	*94*
Tin	*500*	*512*	*102*
Titanium	*500*	*508*	*102*
Vanadium	*500*	*484*	*97*
Zinc	*1000*	*971*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-81B-040213 MS
Lab ID: 240-22732-7 MS
Lab Name: TestAmerica Canton
Job No.: 240-22732-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	160000		110000		50000	98	75-125		6010C
Iron	4330		3400		1000	97	75-125		6010C
Potassium	52400		2800	J	50000	99	75-125		6010C
Magnesium	50700		1400	J	50000	99	75-125		6010C
Manganese	677		190		500	97	75-125		6010C
Sodium	150000		100000		50000	96	75-125		6010C
SiO2, Silica	8160		5700		2140	116	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-81B-040213 MSD
Lab ID: 240-22732-7 MSD
Lab Name: TestAmerica Canton
Job No.: 240-22732-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	156000		50000	90	75-125	3	20		6010C
Iron	4300		1000	93	75-125	1	20		6010C
Potassium	52200		50000	99	75-125	0	20		6010C
Magnesium	50600		50000	98	75-125	0	20		6010C
Manganese	664		500	95	75-125	2	20		6010C
Sodium	145000		50000	85	75-125	4	20		6010C
SiO2, Silica	8030		2140	110	75-125	2	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22732-7

SDG No:

Lab Name: TestAmerica Canton Job No: 240-22732-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	110000		111000		0.19		6010C
Iron	3400		3360		NC		6010C
Potassium	2800	J	2360	J	NC		6010C
Magnesium	1400	J	1430	J	NC		6010C
Manganese	190		193		0.53		6010C
Sodium	100000		102000		0.01		6010C
SiO2, Silica	5700		5400		4.9		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-81543/23 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5100		102	70-130
Iron	200	201		101	70-130
Potassium	5000	4790	J	96	70-130
Magnesium	5000	5120		102	70-130
Manganese	15.0	14.7	J	98	70-130
Sodium	5000	4970	J	99	70-130

Lab Sample ID: CRI 240-81543/38 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1150		107	70-130

Lab Sample ID: CRI 240-81543/39 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5160		103	70-130
Iron	200	203		101	70-130
Potassium	5000	4860	J	97	70-130
Magnesium	5000	5220		104	70-130
Manganese	15.0	14.7	J	98	70-130
Sodium	5000	5020		100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22732-1

SDG No.:

Instrument ID: I9 Date: 04/04/2013 11:44

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/18/2013 08:31 End Date: 04/18/2013 10:20

| Lab Sample Id | D/F | Type | Time | Analytes | | |

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-99095/7 04/18/2013 08:48				CCV 440-99095/24 04/18/2013 09:43				CCV 440-99095/36 04/18/2013 10:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	24.3		25.0	97	47.6		50.0	95	48.0		50.0	96
Arsenic	26.0		25.0	104	48.0		50.0	96	49.1		50.0	98
Barium	25.9		25.0	104	49.3		50.0	99	50.1		50.0	100
Beryllium	25.2		25.0	101	49.8		50.0	100	50.0		50.0	100
Cadmium	25.5		25.0	102	48.6		50.0	97	48.8		50.0	98
Chromium	25.3		25.0	101	49.2		50.0	98	50.8		50.0	102
Cobalt	25.4		25.0	101	48.5		50.0	97	51.1		50.0	102
Copper	26.1		25.0	104	48.7		50.0	97	49.9		50.0	100
Lead	25.0		25.0	100	49.2		50.0	98	50.0		50.0	100
Molybdenum	26.2		25.0	105	47.8		50.0	96	48.4		50.0	97
Nickel	25.9		25.0	103	47.5		50.0	95	48.8		50.0	98
Selenium	26.3		25.0	105	49.4		50.0	99	49.5		50.0	99
Silver	24.5		25.0	98	48.7		50.0	97	47.3		50.0	95
Thallium	24.5		25.0	98	50.4		50.0	101	51.4		50.0	103
Vanadium	26.4		25.0	106	49.5		50.0	99	50.3		50.0	101
Zinc	25.1		25.0	101	47.7		50.0	95	48.5		50.0	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99095/8 04/18/2013 08:50		CCB 440-99095/25 04/18/2013 09:47		CCB 440-99095/37 04/18/2013 10:20			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.311	J	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	0.235	J	0.308	J	0.251	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	0.268	J	1.0	U	0.225	J		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98768/1-A	04/17/2013 09:04	98768		50	50
LCS 440-98768/2-A	04/17/2013 09:04	98768		50	50
240-22732-2	04/17/2013 09:04	98768		50	50
240-22732-2 MS	04/17/2013 09:04	98768		50	50
240-22732-2 MSD	04/17/2013 09:04	98768		50	50
240-22732-5	04/17/2013 09:04	98768		50	50
240-22732-6	04/17/2013 09:04	98768		50	50
240-22732-7	04/17/2013 09:04	98768		50	50
240-22732-8	04/17/2013 09:04	98768		50	50
240-22732-9	04/17/2013 09:04	98768		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98768/1-A

Instrument Code: ICPMS4 Batch No.: 99095

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.893	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	4.56	J		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-98768/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	79.4		99	80	120		6020
Arsenic	80.0	76.5		96	80	120		6020
Beryllium	80.0	79.2		99	80	120		6020
Cadmium	80.0	77.6		97	80	120		6020
Barium	80.0	78.9		99	80	120		6020
Chromium	80.0	77.2		96	80	120		6020
Copper	80.0	77.5		97	80	120		6020
Nickel	80.0	75.9		95	80	120		6020
Lead	80.0	77.9		97	80	120		6020
Selenium	80.0	77.1		96	80	120		6020
Cobalt	80.0	77.9		97	80	120		6020
Silver	80.0	77.1		96	80	120		6020
Thallium	80.0	78.7		98	80	120		6020
Zinc	80.0	74.7		93	80	120		6020
Molybdenum	80.0	76.4		96	80	120		6020
Vanadium	80.0	77.4		97	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICSA 440-99095/11 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Antimony		**0.301**	
Arsenic		**0.0820**	
Barium		**0.176**	
Beryllium		**-0.0100**	
Cadmium		**0.0690**	
Chromium		**1.31**	
Cobalt		**0.0570**	
Copper		**0.627**	
Lead		**0.0920**	
Molybdenum	**2000**	**2143**	**107**
Nickel		**0.795**	
Selenium		**-0.257**	
Silver		**0.0510**	
Thallium		**0.0010**	
Vanadium		**0.204**	
Zinc		**-0.0010**	
Aluminum	*100000*	*87956*	*88*
Calcium	*100000*	*95484*	*95*
Cerium		*0.0200*	
Iron	*100000*	*94433*	*94*
Magnesium	*100000*	*93495*	*93*
Manganese		*0.0350*	
Potassium	*100000*	*96233*	*96*
Sodium	*100000*	*94072*	*94*
Sr		*4.62*	
Tin		*0.176*	
Uranium		*0.0090*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Lab Sample ID: ICSAB 440-99095/12 Instrument ID: ICPMS4

Lab File ID: 012ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**21.3**	**106**
Arsenic	**20.0**	**21.3**	**106**
Barium	**20.0**	**22.2**	**111**
Beryllium	**20.0**	**21.3**	**107**
Cadmium	**20.0**	**20.4**	**102**
Chromium	**20.0**	**20.7**	**104**
Cobalt	**20.0**	**19.1**	**95**
Copper	**20.0**	**19.9**	**99**
Lead	**20.0**	**19.2**	**96**
Molybdenum	**2020**	**2311**	**114**
Nickel	**20.0**	**19.9**	**99**
Selenium	**20.0**	**20.3**	**102**
Silver	**20.0**	**19.2**	**96**
Thallium	**20.0**	**18.6**	**93**
Vanadium	**20.0**	**20.0**	**100**
Zinc	**20.0**	**20.4**	**102**
Aluminum	*100000*	*94414*	*94*
Calcium	*101000*	*102266*	*101*
Cerium	*20.0*	*22.2*	*111*
Iron	*100000*	*100979*	*101*
Magnesium	*101000*	*98405*	*98*
Manganese	*20.0*	*19.9*	*100*
Potassium	*101000*	*102238*	*102*
Sodium	*101000*	*101101*	*101*
Sr	*20.0*	*27.9*	*140*
Tin	*20.0*	*21.6*	*108*
Uranium	*20.0*	*20.3*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW12A-040213 MS
Lab ID: 240-22732-2 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22732-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	80.4		2.0	U	80.0	100	75-125		6020
Arsenic	77.5		5.0	U	80.0	97	75-125		6020
Beryllium	80.9		0.57	J	80.0	100	75-125		6020
Cadmium	78.1		1.0	U	80.0	98	75-125		6020
Barium	152		69		80.0	104	75-125		6020
Chromium	78.3		2.0	U	80.0	98	75-125		6020
Copper	80.3		1.1	J	80.0	99	75-125		6020
Nickel	168		78		80.0	113	75-125		6020
Lead	78.3		0.48	J	80.0	97	75-125		6020
Selenium	76.1		5.0	U	80.0	95	75-125		6020
Cobalt	122		44		80.0	98	75-125		6020
Silver	77.8		1.0	U	80.0	97	75-125		6020
Thallium	79.4		2.0	U	80.0	99	75-125		6020
Zinc	237		150		80.0	111	75-125		6020
Molybdenum	76.5		10	U	80.0	96	75-125		6020
Vanadium	80.2		20	U	80.0	100	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW12A-040213 MSD
Lab ID: 240-22732-2 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22732-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	80.1		80.0	100	75-125	0	20		6020
Arsenic	77.8		80.0	97	75-125	0	20		6020
Beryllium	81.2		80.0	101	75-125	0	20		6020
Cadmium	77.1		80.0	96	75-125	1	20		6020
Barium	150		80.0	102	75-125	1	20		6020
Chromium	77.7		80.0	97	75-125	1	20		6020
Copper	77.9		80.0	96	75-125	3	20		6020
Nickel	165		80.0	109	75-125	2	20		6020
Lead	78.3		80.0	97	75-125	0	20		6020
Selenium	77.2		80.0	96	75-125	1	20		6020
Cobalt	120		80.0	94	75-125	2	20		6020
Silver	77.0		80.0	96	75-125	1	20		6020
Thallium	79.2		80.0	99	75-125	0	20		6020
Zinc	236		80.0	110	75-125	1	20		6020
Molybdenum	76.4		80.0	95	75-125	0	20		6020
Vanadium	79.1		80.0	99	75-125	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW12A-040213 PDS Lab ID: 240-22732-2 PDS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	81.5		2.0	U	80.0	102	75-125		6020
Arsenic	79.0		5.0	U	80.0	99	75-125		6020
Beryllium	80.5		0.57	J	80.0	100	75-125		6020
Cadmium	77.9		1.0	U	80.0	97	75-125		6020
Barium	151		69		80.0	103	75-125		6020
Chromium	78.4		2.0	U	80.0	98	75-125		6020
Copper	80.5		1.1	J	80.0	99	75-125		6020
Nickel	168		78		80.0	113	75-125		6020
Lead	78.3		0.48	J	80.0	97	75-125		6020
Selenium	79.1		5.0	U	80.0	99	75-125		6020
Cobalt	121		44		80.0	96	75-125		6020
Silver	77.7		1.0	U	80.0	97	75-125		6020
Thallium	79.4		2.0	U	80.0	99	75-125		6020
Zinc	233		150		80.0	105	75-125		6020
Molybdenum	78.7		10	U	80.0	98	75-125		6020
Vanadium	81.6		20	U	80.0	102	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22732-9

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22732-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	5.0	U	25	U	NC		6020
Beryllium	0.39	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	62		62.4		0.40		6020
Chromium	2.0	U	10	U	NC		6020
Copper	2.0	U	10	U	NC		6020
Nickel	66		67.8		2.9		6020
Lead	1.0	U	5.0	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	41		38.4		5.8		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	110		103		NC		6020
Molybdenum	10	U	50	U	NC		6020
Vanadium	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-99095/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.08	J	108	50-150
Arsenic	1.00	1.17		117	50-150
Beryllium	0.500	0.493	J	99	50-150
Cadmium	0.500	0.497	J	99	50-150
Barium	1.00	1.03		103	50-150
Chromium	1.00	0.985	J	99	50-150
Copper	1.00	1.22	J	122	50-150
Nickel	1.00	1.15	J	115	50-150
Lead	1.00	0.993	J	99	50-150
Selenium	1.00	1.05	J	105	50-150
Cobalt	0.500	0.488	J	98	50-150
Silver	1.00	0.903	J	90	50-150
Thallium	1.00	0.961	J	96	50-150
Molybdenum	1.00	1.05	J	105	50-150
Vanadium	2.00	2.01		101	50-150

Lab Sample ID: CRI 440-99095/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.98	J	99	50-150
Arsenic	2.00	2.08		104	50-150
Beryllium	1.00	0.973		97	50-150
Cadmium	1.00	0.986	J	99	50-150
Barium	2.00	2.06		103	50-150
Chromium	2.00	1.99	J	100	50-150
Copper	2.00	2.11		105	50-150
Nickel	2.00	2.40		120	50-150
Lead	2.00	1.98		99	50-150
Selenium	2.00	1.98	J	99	50-150
Cobalt	1.00	0.964	J	96	50-150
Silver	2.00	1.88		94	50-150
Thallium	2.00	1.90		95	50-150
Zinc	10.0	12.1	J	121	50-150
Molybdenum	2.00	2.05		102	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-99095/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	4.00	3.92		98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22732-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22732-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/18/2013 End Date: 04/18/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-99095/2 IC	08:34	100		100		100		100		100	
STD1 440-99095/3 IC	08:37	100		99		100		100		99	
STD2 440-99095/4 IC	08:40	101		101		100		99		100	
STD3 440-99095/5 IC	08:42	102		101		101		102		102	
STD4 440-99095/6 IC	08:45	99		100		101		102		102	
ICV 440-99095/7	08:48	100		99		100		101		101	
ICB 440-99095/8	08:50	100		99		99		100		99	
CRI 440-99095/9	08:53	101		99		99		100		101	
CRI 440-99095/10	08:56	101		99		99		100		101	
ICSA 440-99095/11	09:02	86		98		96		94		97	
ICSAB 440-99095/12	09:04	84		99		97		94		97	
MB 440-98768/1-A	09:38	85		97		100		105		105	
LCS 440-98768/2-A	09:40	81		95		99		102		105	
CCV 440-99095/24	09:43	81		94		98		102		104	
CCB 440-99095/25	09:47	81		92		97		103		102	
240-22732-2	09:50	79		94		97		102		104	
240-22732-2 MS	09:53	78		92		97		100		104	
240-22732-2 MSD	09:55	78		95		97		101		105	
240-22732-2 PDS	09:58	79		93		98		101		104	
240-22732-5	10:00	82		96		99		103		106	
240-22732-6	10:03	79		96		100		102		106	
240-22732-7	10:06	81		95		95		97		101	
240-22732-8	10:09	86		96		98		102		105	
240-22732-9	10:11	87		96		98		102		104	
240-22732-9 SD	10:14	84		95		98		103		105	
CCV 440-99095/36	10:17	81		93		97		101		105	
CCB 440-99095/37	10:20	82		91		97		100		104	

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW12A-040213	240-22732-2
MRC-MW-81B-040213	240-22732-7
MRC-MW-60B-040213	240-22732-9

Comments:

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 02/19/2013 16:33 End Date: 02/19/2013 20:19

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
ZZZZZZ			16:33		
ZZZZZZ			16:50		
STD1 240-75854/3 IC	1		17:07	X	X
STD2 240-75854/4 IC	1		17:25	X	X
STD3 240-75854/5 IC	1		17:42	X	X
STD4 240-75854/6 IC	1		18:00	X	X
STD5 240-75854/7 ICRT	1		18:17	X	X
STD6 240-75854/8 IC	1		18:34	X	X
STD7 240-75854/9 IC	1		18:52	X	X
STD8 240-75854/10 IC	1		19:09	X	X
STD9 240-75854/11 IC	1		19:27	X	X
ZZZZZZ			19:44		
ICV 240-75854/13	1		20:01	X	X
ICB 240-75854/14			20:19		

Prep Types:

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Analyst: LG Batch Start Date: 02/19/2013

Reporting Units: mg/L Analytical Batch No.: 75854

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:01	Chloride	51.6	50.0	103	90-110		WCICLCS_00162
			Sulfate	49.5	50.0	99	90-110		WCICLCS_00162

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/03/2013 10:54 End Date: 04/03/2013 20:51

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
ZZZZZZ			10:54		
CCV 240-80404/3	1		11:11	X	X
CCB 240-80404/4	1		11:27	X	X
MB 240-80404/5	1	T	11:44	X	X
LCS 240-80404/6	1	T	12:00	X	X
ZZZZZZ			12:16		
ZZZZZZ			12:33		
ZZZZZZ			12:49		
ZZZZZZ			13:06		
ZZZZZZ			13:22		
ZZZZZZ			13:38		
ZZZZZZ			13:55		
ZZZZZZ			14:11		
CCV 240-80404/15	1		14:28	X	X
CCB 240-80404/16	1		14:44	X	X
ZZZZZZ			15:00		
ZZZZZZ			15:17		
ZZZZZZ			15:33		
240-22732-7	1	T	18:56		X
240-22732-7 MS	1	T	19:13		X
240-22732-8	1	T	19:29	X	X
CCV 240-80404/27	1		19:46	X	X
CCB 240-80404/28	1		20:02	X	X
240-22732-9	1	T	20:19	X	X
CCV 240-80404/30	1		20:35	X	X
CCB 240-80404/31	1		20:51	X	X

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Analyst: AM Batch Start Date: 04/03/2013

Reporting Units: mg/L Analytical Batch No.: 80404

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	11:11	Chloride	47.6	50.0	95	90-110		WCICCCV_00257
			Sulfate	46.2	50.0	92	90-110		WCICCCV_00257
4	CCB	11:27	Chloride	1.0				U	
			Sulfate	1.0				U	
15	CCV	14:28	Chloride	47.6	50.0	95	90-110		WCICCCV_00257
			Sulfate	46.1	50.0	92	90-110		WCICCCV_00257
16	CCB	14:44	Chloride	1.0				U	
			Sulfate	1.0				U	
27	CCV	19:46	Chloride	48.9	50.0	98	90-110		WCICCCV_00257
			Sulfate	47.0	50.0	94	90-110		WCICCCV_00257
28	CCB	20:02	Chloride	1.0				U	
			Sulfate	1.0				U	
30	CCV	20:35	Chloride	49.1	50.0	98	90-110		WCICCCV_00257
			Sulfate	47.0	50.0	94	90-110		WCICCCV_00257
31	CCB	20:51	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/13/2013 10:38 End Date: 04/13/2013 19:03

Lab Sample Id	D/F	Type	Time	Analytes	
				Cl-	SO4
CCV 240-81813/1	1		10:38	X	X
CCB 240-81813/2	1		10:56	X	X
ZZZZZZ			11:13		
ZZZZZZ			11:30		
ZZZZZZ			11:48		
240-22706-A-18 MS	1	T	12:05	X	
ZZZZZZ			12:22		
CCV 240-81813/8	1		12:40	X	X
CCB 240-81813/9	1		12:57	X	X
MB 240-81813/10	1	T	13:15	X	X
LCS 240-81813/11	1	T	13:32	X	X
ZZZZZZ			13:49		
ZZZZZZ			14:07		
ZZZZZZ			14:24		
240-22732-7	2	T	14:42	X	
ZZZZZZ			14:59		
CCV 240-81813/17	1		15:16	X	X
CCB 240-81813/18	1		15:34	X	X
ZZZZZZ			15:51		
ZZZZZZ			16:09		
ZZZZZZ			16:26		
ZZZZZZ			16:43		
ZZZZZZ			17:01		
ZZZZZZ			17:18		
ZZZZZZ			17:36		
ZZZZZZ			17:53		
ZZZZZZ			18:10		
CCV 240-81813/28			18:45		
CCB 240-81813/29			19:03		
ZZZZZZ			18:28		

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Analyst: LG Batch Start Date: 04/13/2013

Reporting Units: mg/L Analytical Batch No.: 81813

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	10:38	Chloride	52.9	50.0	106	90-110		WCICCCV_00260
			Sulfate	51.4	50.0	103	90-110		WCICCCV_00260
2	CCB	10:56	Chloride	1.0				U	
			Sulfate	1.0				U	
8	CCV	12:40	Chloride	53.2	50.0	106	90-110		WCICCCV_00260
			Sulfate	51.9	50.0	104	90-110		WCICCCV_00260
9	CCB	12:57	Chloride	0.137				J	
			Sulfate	1.0				U	
17	CCV	15:16	Chloride	53.1	50.0	106	90-110		WCICCCV_00260
			Sulfate	51.5	50.0	103	90-110		WCICCCV_00260
18	CCB	15:34	Chloride	0.346				J	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/09/2013 10:30 End Date: 04/09/2013 16:03

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
IC 240-81218/1			10:30	X
IC 240-81218/2			10:30	X
IC 240-81218/3			10:30	X
IC 240-81218/4			10:30	X
ICV 240-81218/5	5		10:30	X
ICB 240-81218/6	1		10:43	X
MB 240-81218/7	1	T	10:47	X
LCS 240-81218/8	5	T	10:50	X
ZZZZZZ			10:57	
ZZZZZZ			11:09	
ZZZZZZ			11:22	
ZZZZZZ			12:15	
ZZZZZZ			12:23	
ZZZZZZ			12:32	
240-22685-A-6 MS	1	T	12:48	X
240-22685-A-6 MSD	1	T	12:50	X
CCV 240-81218/17	1		12:52	X
CCB 240-81218/18	1		13:09	X
ZZZZZZ			13:16	
ZZZZZZ			13:22	
ZZZZZZ			13:35	
240-22732-2	1	T	13:46	X
240-22732-7	1	T	13:56	X
240-22732-9	1	T	14:06	X
ZZZZZZ			14:13	
ZZZZZZ			14:26	
ZZZZZZ			14:30	
ZZZZZZ			14:38	
CCV 240-81218/29	1		14:44	X
CCB 240-81218/30	1		14:56	X
ZZZZZZ			15:20	
ZZZZZZ			15:26	
ZZZZZZ			15:30	
ZZZZZZ			15:40	
CCV 240-81218/35			15:49	
CCB 240-81218/36			16:03	

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Analyst: JB Batch Start Date: 04/09/2013

Reporting Units: mg/L Analytical Batch No.: 81218

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	10:30	Ammonia (as N)	9.70	8.93	109	90-110		WCSIMP192-505_00001
6	ICB	10:43	Ammonia (as N)	0.20				U	
17	CCV	12:52	Ammonia (as N)	2.45	2.50	98	90-110		WCNH31000_00021
18	CCB	13:09	Ammonia (as N)	0.20				U	
29	CCV	14:44	Ammonia (as N)	2.63	2.50	105	90-110		WCNH31000_00021
30	CCB	14:56	Ammonia (as N)	0.20				U	





Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/03/2013 10:54 End Date: 04/03/2013 20:51

Lab Sample Id	D/F	Type	Time	Analytes		
				N-No2	NO3	Orthophosp
ZZZZZZ			10:54			
CCV 240-80405/3	1		11:11	X	X	X
CCB 240-80405/4	1		11:27	X	X	X
MB 240-80405/5	1	T	11:44	X	X	X
LCS 240-80405/6	1	T	12:00	X	X	X
ZZZZZZ			12:16			
ZZZZZZ			12:33			
ZZZZZZ			12:49			
ZZZZZZ			13:06			
ZZZZZZ			13:22			
ZZZZZZ			13:38			
ZZZZZZ			13:55			
ZZZZZZ			14:11			
CCV 240-80405/15	1		14:28	X	X	X
CCB 240-80405/16	1		14:44	X	X	X
ZZZZZZ			15:00			
ZZZZZZ			15:17			
ZZZZZZ			15:33			
ZZZZZZ			17:51			
ZZZZZZ			18:07			
ZZZZZZ			18:24			
ZZZZZZ			18:40			
240-22732-7	1	T	18:56	X	X	X
240-22732-7 MS	1	T	19:13	X	X	X
240-22732-2	1	T	19:29	X	X	X
CCV 240-80405/27	1		19:46	X	X	X
CCB 240-80405/28	1		20:02	X	X	X
240-22732-5	1	T	20:19	X	X	X
CCV 240-80405/30	1		20:35	X	X	X
CCB 240-80405/31	1		20:51	X	X	X

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Analyst: AM Batch Start Date: 04/03/2013

Reporting Units: mg/L Analytical Batch No.: 80405

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	11:11	Nitrite as N	2.35	2.50	94	90-110		WCICCCV_00257
			Nitrate as N	2.37	2.50	95	90-110		WCICCCV_00257
			Orthophosphate as P	2.54	2.50	101	90-110		WCICCCV_00257
4	CCB	11:27	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
15	CCV	14:28	Nitrite as N	2.35	2.50	94	90-110		WCICCCV_00257
			Nitrate as N	2.38	2.50	95	90-110		WCICCCV_00257
			Orthophosphate as P	2.71	2.50	109	90-110		WCICCCV_00257
16	CCB	14:44	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
27	CCV	19:46	Nitrite as N	2.36	2.50	94	90-110		WCICCCV_00257
			Nitrate as N	2.37	2.50	95	90-110		WCICCCV_00257
			Orthophosphate as P	2.47	2.50	99	90-110		WCICCCV_00257
28	CCB	20:02	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
30	CCV	20:35	Nitrite as N	2.37	2.50	95	90-110		WCICCCV_00257
			Nitrate as N	2.43	2.50	97	90-110		WCICCCV_00257
			Orthophosphate as P	2.69	2.50	108	90-110		WCICCCV_00257
31	CCB	20:51	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/12/2013 11:22 End Date: 04/12/2013 15:54

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-81866/1	1		11:22	X
CCB 240-81866/2	1		11:33	X
MB 240-81866/3	1	D	11:44	X
LCS 240-81866/4	2	D	11:55	X
ZZZZZZ			12:06	
240-22680-F-2 MS	2	D	12:47	X
240-22732-2	1	D	12:58	X
240-22732-7	1	D	13:39	X
240-22732-9	1	D	14:20	X
ZZZZZZ			15:01	
CCV 240-81866/11	1		15:43	X
CCB 240-81866/12	1		15:54	X

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Analyst: TH Batch Start Date: 04/12/2013

Reporting Units: mg/L Analytical Batch No.: 81866

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:22	Dissolved Organic Carbon	26.3	25.0	105	90-110		WC TOC CCV_00128
2	CCB	11:33	Dissolved Organic Carbon	1.0				U	
11	CCV	15:43	Dissolved Organic Carbon	26.8	25.0	107	90-110		WC TOC CCV_00128
12	CCB	15:54	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/11/2013 12:36 End Date: 04/11/2013 22:16

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			12:36	
RINSE 240-81734/2			12:45	
ZZZZZZ			13:00	
LCS 240-81734/4	1	T	13:08	X
MB 240-81734/5	1	T	13:15	X
ZZZZZZ			13:18	
240-22732-2	1	T	15:28	X
ZZZZZZ			15:38	
ZZZZZZ			15:48	
240-22732-J-7 MS	1	T	16:07	X
240-22732-J-7 MSD	1	T	16:20	X
240-22732-9	1	T	16:27	X
ZZZZZZ			16:34	
ZZZZZZ			16:45	
ZZZZZZ			16:58	
ZZZZZZ			17:09	
ZZZZZZ			17:13	
ZZZZZZ			17:24	
ZZZZZZ			17:36	
ZZZZZZ			17:45	
ZZZZZZ			17:52	
ZZZZZZ			17:59	
ZZZZZZ			18:05	
ZZZZZZ			18:13	
ZZZZZZ			18:21	
ZZZZZZ			18:28	
ZZZZZZ			18:37	
ZZZZZZ			18:41	
ZZZZZZ			18:50	
ZZZZZZ			18:59	
ZZZZZZ			19:08	
ZZZZZZ			19:24	
ZZZZZZ			19:32	
ZZZZZZ			19:38	
ZZZZZZ			19:45	
ZZZZZZ			19:53	
ZZZZZZ			20:08	
ZZZZZZ			20:22	
ZZZZZZ			20:25	
ZZZZZZ			20:32	
ZZZZZZ			20:42	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/12/2013 12:14 End Date: 04/13/2013 00:29

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			12:14	
RINSE 240-81845/2			12:23	
ZZZZZZ			12:35	
LCS 240-81845/4	1	T	12:43	X
MB 240-81845/5	1	T	12:49	X
ZZZZZZ			12:53	
240-22732-7	1	T	15:23	X
ZZZZZZ			15:31	
190-418-A-1 DU	1	T	16:40	X
190-418-A-1 MS	1	T	16:57	X
190-418-A-1 MSD	1	T	17:13	X
ZZZZZZ			17:19	
ZZZZZZ			17:25	
ZZZZZZ			17:32	
ZZZZZZ			17:43	
ZZZZZZ			17:55	
ZZZZZZ			17:58	
ZZZZZZ			18:11	
ZZZZZZ			18:19	
ZZZZZZ			18:26	
ZZZZZZ			18:35	
ZZZZZZ			18:46	
ZZZZZZ			18:57	
ZZZZZZ			19:06	
ZZZZZZ			19:16	
ZZZZZZ			19:30	
ZZZZZZ			19:40	
ZZZZZZ			19:43	
ZZZZZZ			19:53	
ZZZZZZ			20:05	
ZZZZZZ			20:18	
ZZZZZZ			20:31	
ZZZZZZ			20:39	
ZZZZZZ			20:45	
ZZZZZZ			21:00	
ZZZZZZ			21:13	
ZZZZZZ			21:32	
ZZZZZZ			21:50	
ZZZZZZ			21:53	
ZZZZZZ			22:06	
ZZZZZZ			22:21	

FORM XIII-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 04/04/2013 09:55 End Date: 04/04/2013 09:55

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-80556/1	1	T	09:55	X
LCS 240-80556/2	1	T	09:55	X
240-22746-B-2 DU	1	T	09:55	X
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
240-22732-2	1	T	09:55	X
240-22732-7	1	T	09:55	X
240-22732-9	1	T	09:55	X
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	
ZZZZZZ			09:55	

Prep Types:
T = Total/NA

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22732-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 80556	Date: 04/04/2013 09:55						
160.1	MB 240-80556/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID: 80404	Date: 04/03/2013 11:44						
300.0	MB 240-80404/5	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-80404/5	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 80405	Date: 04/03/2013 11:44						
300.0	MB 240-80405/5	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80405/5	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80405/5	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID: 81813	Date: 04/13/2013 13:15						
300.0	MB 240-81813/10	Chloride	0.124	J	mg/L	1.0	1
300.0	MB 240-81813/10	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 81734	Date: 04/11/2013 13:15						
310.1	MB 240-81734/5	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID: 81845	Date: 04/12/2013 12:49						
310.1	MB 240-81845/5	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID: 81218	Date: 04/09/2013 10:47						
350.3	MB 240-81218/7	Ammonia (as N)	0.20	U	mg/L	0.20	1
Batch ID: 81866	Date: 04/12/2013 11:44						
9060	MB 240-81866/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

FORM III-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80556	Date: 04/04/2013 09:55										
						LCS Source: WCWIBBYSOLIDS_00002					
160.1	LCS 240-80556/2	Total Dissolved Solids	194		mg/L	206	94	88-110			
Batch ID: 80404	Date: 04/03/2013 12:00										
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80404/6	Chloride	48.7		mg/L	50.0	97	90-110			
300.0	LCS 240-80404/6	Sulfate	46.8		mg/L	50.0	94	90-110			
Batch ID: 80405	Date: 04/03/2013 12:00										
						LCS Source: WCICLCS_00173					
300.0	LCS 240-80405/6	Nitrite as N	2.40		mg/L	2.50	96	90-110			
300.0	LCS 240-80405/6	Nitrate as N	2.46		mg/L	2.50	98	90-110			
300.0	LCS 240-80405/6	Orthophosphate as P	2.60		mg/L	2.50	104	90-110			
Batch ID: 81813	Date: 04/13/2013 13:32										
						LCS Source: WCICLCS_00177					
300.0	LCS 240-81813/11	Chloride	54.2		mg/L	50.0	108	90-110			
300.0	LCS 240-81813/11	Sulfate	52.3		mg/L	50.0	105	90-110			
Batch ID: 81734	Date: 04/11/2013 13:08										
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-81734/4	Alkalinity	83.8		mg/L	79.5	105	90-127			
Batch ID: 81845	Date: 04/12/2013 12:43										
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-81845/4	Alkalinity	83.1		mg/L	79.5	105	90-127			
Batch ID: 81218	Date: 04/09/2013 10:50										
						LCS Source: WCSIMP192-505_00001					
350.3	LCS 240-81218/8	Ammonia (as N)	9.31		mg/L	8.93	104	85-114			
Batch ID: 81866	Date: 04/12/2013 11:55										
						LCS Source: WC LCS_00006					
9060	LCS 240-81866/4	Dissolved Organic Carbon	50.7		mg/L	48.1	105	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	80556	Date: 04/04/2013 09:55						
160.1		240-22746-B-2	Total Dissolved Solids	870	mg/L			
160.1		240-22746-B-2 DU	Total Dissolved Solids	863	mg/L	0.6	20	
Batch ID:	81845	Date: 04/12/2013 16:40						
310.1		190-418-A-1	Alkalinity	80	mg/L			
310.1		190-418-A-1 DU	Alkalinity	81.9	mg/L	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80404	Date: 04/03/2013 19:13										
300.0	240-22732-7	Sulfate	14		mg/L						
300.0	240-22732-7 MS	Sulfate	66.0		mg/L	50.0	104	80-120			
Batch ID: 80405	Date: 04/03/2013 19:13										
300.0	240-22732-7	Nitrite as N	0.10	U	mg/L						
300.0	240-22732-7 MS	Nitrite as N	2.70		mg/L	2.50	108	80-120			
300.0	240-22732-7	Nitrate as N	0.10	U	mg/L						
300.0	240-22732-7 MS	Nitrate as N	2.59		mg/L	2.50	103	80-120			
300.0	240-22732-7	Orthophosphate as P	0.50	U	mg/L						
300.0	240-22732-7 MS	Orthophosphate as P	1.80		mg/L	2.50	72	80-120			F
Batch ID: 81613	Date: 04/13/2013 12:05										
300.0	240-22706-A-1 8	Chloride	35		mg/L						B
300.0	240-22706-A-1 8 MS	Chloride	95.2		mg/L	50.0	121	80-120			F
Batch ID: 81734	Date: 04/11/2013 16:07										
310.1	240-22732-J-7	Alkalinity	9.9		mg/L						
310.1	240-22732-J-7 MS	Alkalinity	311		mg/L	500	60	10-160			
Batch ID: 81845	Date: 04/12/2013 16:57										
310.1	190-418-A-1	Alkalinity	80		mg/L						
310.1	190-418-A-1 MS	Alkalinity	560		mg/L	500	96	10-160			
Batch ID: 81218	Date: 04/09/2013 12:48										
350.3	240-22685-A-6	Ammonia (as N)	0.20	U	mg/L						
350.3	240-22685-A-6 MS	Ammonia (as N)	2.70		mg/L	2.50	108	75-125			
Batch ID: 81866	Date: 04/12/2013 12:47										
9060	240-22680-F-2	Dissolved Organic Carbon	2.1		mg/L						
9060	240-22680-F-2 MS	Dissolved Organic Carbon	29.6		mg/L	25.0	110	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 81734		Date: 04/11/2013 16:20									
310.1	240-22732-J-7 MSD	Alkalinity	322		mg/L	500	63	10-160	3	24	
Batch ID: 81845		Date: 04/12/2013 17:13									
310.1	190-418-A-1 MSD	Alkalinity	567		mg/L	500	98	10-160	1	24	
Batch ID: 81218		Date: 04/09/2013 12:50									
350.3	240-22685-A-6 MSD	Ammonia (as N)	2.76		mg/L	2.50	111	75-125	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

VOC CALCULATION

	SAMPLE		
	MRC-MW-60B-040213		
TARGET ANALYTE	**trichloroethene**		
ANALYTE RESPONSE	1308466		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1252656		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.3397		
DILUTION FACTOR (DF)	166.67		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	5124.98	µg/L

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-60B-040213 | Lab Sample ID: 240-22732-9

Matrix: Water | Lab File ID: UXC0575.D

Analysis Method: 8260B | Date Collected: 04/02/2013 15:44

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 18:36

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	830	U	830	18
87-68-3	Hexachlorobutadiene	170	U	170	50
591-78-6	2-Hexanone	830	U	830	68
98-82-8	Isopropylbenzene	170	U	170	22
75-09-2	Methylene Chloride	82	J	170	55
108-10-1	4-Methyl-2-pentanone	830	U	830	53
1634-04-4	Methyl tert-butyl ether	170	U	170	28
179601-23-1	m-Xylene & p-Xylene	330	U	330	40
91-20-3	Naphthalene	170	U	170	40
104-51-8	n-Butylbenzene	170	U	170	20
103-65-1	n-Propylbenzene	170	U	170	23
95-47-6	o-Xylene	170	U	170	23
99-87-6	p-Isopropyltoluene	170	U	170	20
135-98-8	sec-Butylbenzene	170	U	170	22
100-42-5	Styrene	170	U	170	18
994-05-8	Tert-amyl-methyl ether (TAME)	830	U	830	11
75-65-0	tert-Butyl alcohol	3300	U	3300	650
98-06-6	tert-Butylbenzene	170	U	170	22
630-20-6	1,1,1,2-Tetrachloroethane	170	U	170	38
79-34-5	1,1,2,2-Tetrachloroethane	170	U	170	30
127-18-4	Tetrachloroethene	170	U	170	48
108-88-3	Toluene	170	U	170	22
156-60-5	trans-1,2-Dichloroethene	170	U	170	32
10061-02-6	trans-1,3-Dichloropropene	170	U	170	32
87-61-6	1,2,3-Trichlorobenzene	170	U	170	28
120-82-1	1,2,4-Trichlorobenzene	170	U	170	25
71-55-6	1,1,1-Trichloroethane	170	U	170	37
79-01-6	Trichloroethene	5100		170	28
75-69-4	Trichlorofluoromethane	170	U	170	35
96-18-4	1,2,3-Trichloropropane	170	U	170	72
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	170	U	170	47
526-73-8	1,2,3-Trimethylbenzene	830	U	830	0.98
95-63-6	1,2,4-Trimethylbenzene	170	U	170	20
108-05-4	Vinyl acetate	330	U	330	32
75-01-4	Vinyl chloride	170	U	170	37

Report Date: 10-Apr-2013 08:28:37 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\A3UX15\20130409-18686.b\UXC0575.D
Lims ID: 240-22732-A-9 Client ID: MRC-MW-60B-040213
Inject. Date: 09-Apr-2013 18:36:30 Dil. Factor: 166.6700
Sample Type: Client
Sample ID: 240-0018686-023
Misc. Info.: C30409A,8260LLUX15,,43582
Operator: 43582 Instrument ID: A3UX15
Purge Vol: 5.000 mL ALS Bottle#: 23
Lims Batch ID: 81120 Lims Sample ID: 23
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A3UX15\20130409-18686.b\8260_15.m
Last Update: 10-Apr-2013 08:28:30 Calib Date: 04-Apr-2013 16:10:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX15\20130404-18552.b\UXC0384.D
Limit Group: MSV 8260B ICAL
Integrator: RTE ID Type: Deconvolution ID
Column Type: DB-624 Column Dia: 0.18 mm
Process Host: XAWRK014

First Level Reviewer: evansle Date: 10-Apr-2013 08:20:36

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	4.668	4.656	0.012	99	1252656	10.0	
* 2 Chlorobenzene-d5	117	7.301	7.301	0.0	84	881168	10.0	
* 3 1,4-Dichlorobenzene-d4	152	9.506	9.506	0.0	94	408026	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.111	4.099	0.012	64	274589	7.52	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.384	4.383	0.001	0	358294	9.14	
$ 7 Toluene-d8 (Surr)	98	6.008	6.008	0.0	94	1141755	7.77	
$ 131 4-Bromofluorobenzene (Surr)	95	8.404	8.392	0.012	96	342013	7.48	
12 Dichlorodifluoromethane	85		1.158					
13 Chloromethane	50		1.265					9
14 Vinyl chloride	62		1.348					9
15 Bromomethane	94		1.573					
16 Chloroethane	64		1.656					
18 Trichlorofluoromethane	101		1.846					
21 1,1-Dichloroethene	96		2.261					9
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.273					9
22 Acetone	43	2.308	2.308	0.0	70	11092	0.2154	
26 Carbon disulfide	76		2.427					
30 Methylene Chloride	84	2.664	2.652	0.012	90	64308	0.4908	
31 2-Methyl-2-propanol	59		2.771					
33 trans-1,2-Dichloroethene	96		2.877					
34 Methyl tert-butyl ether	73		2.889					
36 1,1-Dichloroethane	63		3.221					9
37 Vinyl acetate	86		3.281					
38 Isopropyl ether	87		3.293					
40 Tert-butyl ethyl ether	59		3.589					9
42 cis-1,2-Dichloroethene	96	3.708	3.707	0.001	65	41320	0.8752	
43 2,2-Dichloropropane	77		3.707					9
41 2-Butanone (MEK)	43		3.731					
47 Chlorobromomethane	128		3.909					9
49 Chloroform	83		3.968					

Report Date: 10-Apr-2013 08:28:37 Chrom Revision: 2.0 01-Apr-2013 21:16:10
Data File: \\Ncchrom\ChromData\A3UX15\20130409-18686.b\UXC0575.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
50 1,1,1-Trichloroethane	97		4.122					
52 1,1-Dichloropropene	75		4.253					9
53 Carbon tetrachloride	117		4.253					
55 Benzene	78		4.431					9
56 1,2-Dichloroethane	62		4.443					
57 Tert-amyl methyl ether	73		4.526					
60 Trichloroethene	130	4.965	4.964	0.001	94	1308466	30.7	
62 1,2-Dichloropropane	63		5.154					
65 Dibromomethane	93		5.261					
67 Dichlorobromomethane	83		5.391					9
69 2-Chloroethyl vinyl ether	63		5.664					
70 cis-1,3-Dichloropropene	75		5.783					9
71 4-Methyl-2-pentanone (MIBK)	43		5.925					9
72 Toluene	91		6.067					9
73 trans-1,3-Dichloropropene	75		6.269					
77 Tetrachloroethene	164		6.553					9
76 1,3-Dichloropropane	76		6.577					
78 2-Hexanone	43		6.660					9
79 Chlorodibromomethane	129		6.779					
123 Ethylene Dibromide	107		6.874					
82 Chlorobenzene	112		7.324					
83 1,1,1,2-Tetrachloroethane	131		7.407					
84 Ethylbenzene	106		7.431					
10 m-Xylene & p-Xylene	91		7.538					9
85 o-Xylene	106		7.905					
86 Styrene	104		7.917					9
87 Bromoform	173		8.095					
88 Isopropylbenzene	105		8.261					
91 Bromobenzene	156		8.534					9
90 1,1,2,2-Tetrachloroethane	83		8.546					
92 1,2,3-Trichloropropane	110		8.581					9
94 N-Propylbenzene	120		8.652					
95 2-Chlorotoluene	126		8.724					
104 4-Chlorotoluene	91		8.830					9
97 tert-Butylbenzene	119		9.127					
98 1,2,4-Trimethylbenzene	105		9.174					9
99 sec-Butylbenzene	105		9.340					9
100 1,3-Dichlorobenzene	146		9.435					
101 4-Isopropyltoluene	119		9.494					
102 1,4-Dichlorobenzene	146		9.530					
103 1,2,3-Trimethylbenzene	105		9.578					
105 n-Butylbenzene	91		9.886					9
106 1,2-Dichlorobenzene	146		9.886					
107 1,2-Dibromo-3-Chloropropane	157		10.657					
109 1,2,4-Trichlorobenzene	180		11.463					
110 Hexachlorobutadiene	225		11.641					
111 Naphthalene	128		11.700					9
112 1,2,3-Trichlorobenzene	180		11.937					
S 114 Xylenes, Total	106		16.530					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22732-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.4443		1.00	0.0100	13.7	50.0
Chloromethane	Ave	0.5133	0.5569	0.1000	1.00	0.0100	8.5	50.0
Vinyl chloride	Ave	0.5765	0.6443		1.00	0.0100	11.8	20.0
Bromomethane	Ave	0.3951	0.4492		1.00	0.0100	13.7	50.0
Chloroethane	Ave	0.3438	0.4113		1.00	0.0100	19.6	50.0
Trichlorofluoromethane	Ave	0.5693	0.5459		1.00	0.0100	-4.1	50.0
Acrolein	Qua		0.0522		20.0	0.100	40.5	50.0
1,1-Dichloroethene	Ave	0.3445	0.4124		1.00	0.0100	19.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3122		1.00	0.0100	18.6	50.0
Acetone	Qua		0.0794		10.0	0.0200	7.1	50.0
Iodomethane	Ave	0.4958	0.6073		1.00	0.0100	22.5	50.0
Carbon disulfide	Ave	0.7463	0.9707		1.00	0.0100	30.1	50.0
Acetonitrile	Ave	0.0282	0.0328		20.0	0.100	16.5	50.0
Methyl acetate	Ave	0.1586	0.1592		10.0	0.0200	0.3	50.0
Methylene Chloride	Lin1		0.4876		1.00	0.0100	29.1	50.0
tert-Butyl alcohol	Ave	0.0097	0.0094		50.0	0.200	-2.4	50.0
Acrylonitrile	Ave	0.0871	0.0984		20.0	0.0200	12.9	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.4026		1.00	0.0100	12.8	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6773		1.00	0.0100	7.3	50.0
Hexane	Ave	0.0668	0.0796		1.00	0.0100	19.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.6212	0.1000	1.00	0.0100	8.1	50.0
Vinyl acetate	Ave	0.0383	0.0338		2.00	0.0100	-11.8	50.0
2,2-Dichloropropane	Ave	0.2770	0.2806		1.00	0.0100	1.3	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4009		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0913		10.0	0.0200	0.3	50.0
Bromochloromethane	Ave	0.1662	0.1784		1.00	0.0100	7.3	50.0
Tetrahydrofuran	Lin1		0.0526		5.00	0.0100	5.3	50.0
Chloroform	Ave	0.5671	0.5980		1.00	0.0100	5.4	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4423		1.00	0.0100	7.4	50.0
Cyclohexane	Ave	0.5423	0.6641		1.00	0.0100	22.5	50.0
1,1-Dichloropropene	Ave	0.4381	0.4574		1.00	0.0100	4.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3342		1.00	0.0100	3.0	50.0
Benzene	Ave	1.387	1.429		1.00	0.0100	3.0	50.0
1,2-Dichloroethane	Ave	0.4040	0.3982		1.00	0.0100	-1.4	50.0
Trichloroethene	Ave	0.3397	0.3372		1.00	0.0100	-0.7	50.0
Methylcyclohexane	Ave	0.5006	0.5884		1.00	0.0100	17.5	50.0
1,2-Dichloropropane	Ave	0.3010	0.3181		1.00	0.0100	5.7	20.0
Dibromomethane	Ave	0.1618	0.1588		1.00	0.0100	-1.8	50.0
1,4-Dioxane	Lin1		0.0020		50.0	0.500	-22.8	50.0
Bromodichloromethane	Ave	0.3013	0.2944		1.00	0.0100	-2.3	50.0

SVOC CALCULATION LIQUIDS	SAMPLE MRC-MW-12A-040213		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	499289		
INTERNAL STANDARD	1,4-dichlorobenzene-D4		
I.S. RESPONSE	224523		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.5004		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1030	ml	
DILUTION FACTOR (DF)	5		
INJECTION VOLUME - VOL inj.	0.001	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final / (I.S. RESPONSE) X (CAL. RRF) X (vol. initial)	=	172.5824	ng/ml or ug/l

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW12A-040213 | Lab Sample ID: 240-22732-2

Matrix: Water | Lab File ID: 0412015.D

Analysis Method: 8270D | Date Collected: 04/02/2013 11:00

Extract. Method: 3520C | Date Extracted: 04/08/2013 09:07

Sample wt/vol: 1030(mL) | Date Analyzed: 04/12/2013 12:01

Con. Extract Vol.: 2(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81647 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	170		4.9	2.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		20-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	45		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	50		21-110
4165-62-2	Phenol-d5 (Surr)	55		21-110
1718-51-0	Terphenyl-d14 (Surr)	44		24-110

Report Date: 13-Apr-2013 09:04:57 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4AG2\20130412-18799.b\0412015.D		
Lims ID:	240-22732-M-2-A	Client ID:	MRC-MW12A-040213
Inject. Date:	12-Apr-2013 12:01:30	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0018799-015		
Misc. Info.:	240-22732-M-2-A =240-22732-M-2-A		
Operator:		Instrument ID:	A4AG2
Injection Vol:	1.0 ul	ALS Bottle#:	15
Lims Batch ID:	81647	Lims Sample ID:	15
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20130412-18799.b\8270 ag2.m		
Last Update:	13-Apr-2013 09:04:48	Calib Date:	02-Apr-2013 21:45:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20130402-18465.b\0402027.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK001		

First Level Reviewer: hulat Date: 12-Apr-2013 13:39:24

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.929	5.929	0.0	95	224523	4.00	
* 2 Naphthalene-d8	136	7.047	7.047	0.0	99	885074	4.00	
* 3 Acenaphthene-d10	164	8.539	8.544	-0.005	92	524518	4.00	
* 4 Phenanthrene-d10	188	9.806	9.806	0.0	97	896660	4.00	
* 5 Chrysene-d12	240	12.368	12.368	0.0	98	889857	4.00	
* 6 Perylene-d12	264	14.449	14.449	0.0	96	754389	4.00	
$ 7 2-Fluorophenol	112	4.672	4.677	-0.005	85	116054	1.71	
$ 8 Phenol-d5	99	5.570	5.576	-0.006	99	143559	1.64	
$ 9 Nitrobenzene-d5	82	6.415	6.415	0.0	83	76742	1.00	
$ 10 2-Fluorobiphenyl (Surr)	172	7.956	7.956	0.0	99	169264	1.04	
$ 11 2,4,6-Tribromophenol	330	9.207	9.213	-0.006	86	26156	1.34	
$ 12 Terphenyl-d14	244	11.165	11.170	-0.005	97	152760	0.8795	
26 1,4-Dioxane	88	2.436	2.441	-0.005	91	499289	17.8	M

QC Flag Legend

Review Flags
M - Manually Integrated

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 80256

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/02/2013 15:37 Calibration End Date: 04/02/2013 18:30 Calibration ID: 14347

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-80256/18	0402018.D
Level 2	STD2 240-80256/17	0402017.D
Level 3	STD3 240-80256/16	0402016.D
Level 4	STD4 240-80256/15	0402015.D
Level 5	STD5 240-80256/14	0402014.D
Level 6	STD6 240-80256/13	0402013.D
Level 7	STD7 240-80256/12	0402012.D
Level 8	STD8 240-80256/11	0402011.D
Level 9	STD9 240-80256/10	0402010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane		0.5947	0.5418	0.5104	0.4518	Ave		0.5004				9.7		20.0			
	0.4626	0.4586	0.4905	0.4924													
N-Nitrosodimethylamine		0.4990	0.5985	0.5905	0.6182	Ave		0.6236				10.0		20.0			
	0.6313	0.6556	0.7034	0.6926													
Pyridine		1.0018	1.1053	1.1543	1.1242	Ave		1.1482				6.8		20.0			
	1.1465	1.1644	1.2576	1.2317													
Benzaldehyde	+++++	0.9399	0.9910	0.9986	0.9975	Ave		0.9861			0.0100	2.7		20.0			
	0.9722	0.9750	1.0327	0.9821													
Phenol		1.4876	1.5297	1.4911	1.5147	Ave		1.5276			0.8000	3.2		20.0			
	1.4822	1.5181	1.6234	1.5742													
Aniline		1.8808	1.9101	1.9156	1.9062	Ave		1.9430				3.3		20.0			
	1.9109	1.9330	2.0658	2.0213													
Bis(2-chloroethyl)ether		1.2155	1.2180	1.2254	1.2263	Ave		1.2329			0.7000	2.5		20.0			
	1.2043	1.2283	1.3036	1.2422													
2-Chlorophenol		1.1390	1.2188	1.2090	1.2499	Ave		1.2459			0.8000	5.2		20.0			
	1.2321	1.2499	1.3507	1.3177													
1,3-Dichlorobenzene		1.3059	1.3655	1.3436	1.3328	Ave		1.3565				3.4		20.0			
	1.3162	1.3417	1.4444	1.4021													
1,4-Dichlorobenzene		1.3775	1.3771	1.3656	1.3560	Ave		1.3780				3.0		20.0			
	1.3208	1.3502	1.4508	1.4261													
Benzyl alcohol		0.7191	0.7447	0.8073	0.8005	Ave		0.8001				6.4		20.0			
	0.7892	0.8193	0.8808	0.8399													
1,2-Dichlorobenzene		1.2935	1.3126	1.3293	1.2793	Ave		1.3134				2.9		20.0			
	1.2832	1.2775	1.3845	1.3475													
2-Methylphenol		1.0812	1.1252	1.1212	1.1584	Ave		1.1494			0.7000	4.3		20.0			
	1.1241	1.1532	1.2421	1.1898													

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

OVG CALCULATION	**SAMPLE MRC-MW-81B-040213**		
TARGET ANALYTE	METHANE		
ANALYTE RESPONSE	50434471		
ANALYTE AVERAGE CF RESPONSE	112419		
DILUTION FACTOR (DF)	1		
$\frac{\text{(ANALYTE RESPONSE) X Dilution Factor}}{\text{(AVERAGE ANALYTE RESPONSE)}}$	=	448.6294	ug/l

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22732-1

SDG No.:

Client Sample ID: MRC-MW-81B-040213 | Lab Sample ID: 240-22732-7

Matrix: Water | Lab File ID: Z0040423.D

Analysis Method: RSK-175 | Date Collected: 04/02/2013 12:11

Sample wt/vol: 17(mL) | Date Analyzed: 04/04/2013 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 80546 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	8.0		0.50	0.37
74-84-0	Ethane	0.29	J	0.50	0.10
74-82-8	Methane	450		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	100		40-122

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\ZPID\20130404-18541.b\Z0040423.D		
Lims ID:	240-22732-E-7	Client ID:	MRC-MW-81B-040213
Inject. Date:	04-Apr-2013 17:27:22	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018541-023		
Misc. Info.:			
Operator:	402582	Instrument ID:	ZPID
Purge Vol:	1.000 mL	ALS Bottle#:	1
Lims Batch ID:	80546	Lims Sample ID:	23
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20130404-18541.b\RSK175.m		
Last Update:	05-Apr-2013 08:55:13	Calib Date:	18-Jan-2013 16:58:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Column Type:		Column Dia:	
Process Host:	XAWRK037		

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	0.908	0.909	-0.001	50434471	448.6	
2 Ethylene						
2	1.408	1.406	0.002	755410	8.03	
4 Ethane						
2	1.681	1.683	-0.002	29930	0.2906	
$ 5 1,1,1-Trifluoroethane						
2	2.701	2.703	-0.002	99365016	2621.6	

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22732-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The ml coefficient is the same as Ave CF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 21, 2013**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC/SVOC/DISSOLVED GASES**
LOCKHEED MARTIN – MRC
SDG 240-22783-1

SAMPLES: 8/Aqueous/VOC/SVOC

MRC-MW-71A-040313	MRC-MW-71B-040313	MRC-MW12B-040313
MRC-MW63A-040313	MRC-MW70A-040313	MRC-MW70B-040313
TB-040313		

1/Aqueous/DISSOLVED GASES

MRC-MW12B-040313

Overview

The sample set for Lockheed Martin – MRC, SDG 240-22783-1 consists of seven (7) aqueous environmental samples and one (1) trip blank. The samples were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), and dissolved gases as outlined above. The trip blank was analyzed for VOCs only.

The samples were collected by Tetra Tech on April 3, 2013 and analyzed by Test America (North Canton). All analyses were conducted in accordance with SW-846 Methods 8260B, 8270D, and dissolved gases by method RSK-175 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, internal standard recoveries, chromatographic resolution, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major

- The VOC initial calibration and associated continuing calibrations relative response factors (RRFs) were less than the 0.05 quality control limit for tert-butyl alcohol and vinyl acetate on instrument A3UX15. Only non-detected results were reported for tert-butyl alcohol and vinyl acetate and these results were rejected (UR) in the affected samples.

- The VOC initial calibration and associated continuing calibrations relative response factors (RRFs) were less than the 0.05 quality control limit for tert-butyl alcohol on instrument A3UX16. Only non-detected results were reported for tert-butyl alcohol and these results were rejected (UR) in the affected samples.

- The matrix spike / matrix spike duplicate (MS/MSD) performed on sample MRC-MW-71B-040313 had zero percent recoveries for 2-chloroethyl vinyl ether in the MS and MSD. The nondetected 2-chloroethyl vinyl ether result for sample MRC-MW-71B-040313 has been rejected (UR).

Minor

- The VOC continuing calibration %Ds were greater than the quality control limit of 20% and less than 50% for carbon disulfide, methylene chloride, cis-1,3-dichloropropene, trans-1,3-dichloropropene, dibromochloromethane, bromoform, 1,2-dibromo-3-chloropropane, and naphthalene for instrument A3UX15 on 04/09/13 @ 10:18. The positive methylene chloride result for sample MRC-MW-71B-040313 was qualified as estimated. No action was taken on the nondetected results in the affected samples.

- The VOC continuing calibration %Ds were greater than the quality control limit of 20% and greater than 50% for dichlorodifluoromethane and trichlorofluoromethane for instrument A3UX16 on 04/10/13 @ 13:39. The nondetected dichlorodifluoromethane and trichlorofluoromethane results for the affected samples were qualified as estimated.

- The following compounds were detected in the method blank at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Benzene	0.295 ug/L	1.475 ug/L
Methylene chloride	1.45 ug/L	14.5 ug/L

  An action level of 10 times the maximum contaminant concentration was established for methylene chloride; 5 times for benzene to evaluate laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results less than the action level for methylene chloride and benzene were qualified (B) as a result of laboratory blank contamination.

- Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Notes

Samples MRC-MW-71B-040313, MRC-MW12B-040313, and MRC-MW70B-040313 were diluted for VOCs due to concentrations greater than the linear calibration range of the instrument. This accounts for the elevated detection limits for the nondetected compounds.

The VOC continuing calibration %Ds were greater than the quality control limit of 20% and less than 50% for chloroethane, 1,1,2-trichlorotrifluoroethane, hexachlorobutadiene, and 1,2,3-trichlorobenzene for instrument A3UX16 on 04/10/13 @ 13:39. No action was taken on the nondetected results in the affected samples.

The VOC continuing calibration %D was greater than the quality control limit of 20% and less than 50% for 1,2,3-trimethylbenzene for instrument A3UX16 on 04/10/13 @ 14:02. No action was taken on the nondetected results in the affected samples.

The laboratory control sample (LCS) for batch 81347 had a percent recovery for trichlorofluoromethane greater than the quality control limit. No action was taken on this basis because trichlorofluoromethane was not detected in the affected samples.

The batch (81347) VOC matrix spike / matrix spike duplicate (MS/MSD) had zero percent recoveries for 2-chloroethyl vinyl ether in the MS and MSD, a low tert-butyl alcohol recovery in the MS, and high trichlorofluoromethane recoveries in the MS and MSD. No action was taken on this basis because the MS/MSD was not performed on a Tetra Tech sample.

Sample IDs MRC-MW--71A-040313 and MRC-MW--71B-040313 were corrected in the database to MRC-MW-71A-040313 and MRC-MW-71B-040313.

Executive Summary

Laboratory Performance: Two VOC compounds had RRF noncompliances resulting in the rejection of data. Blank contamination resulted in the qualification of data for the VOC fraction. VOC CCAL %D noncompliances resulted in the qualification of data for the VOC fraction.

Other Factors Affecting Data Quality: An MS/MSD had a zero percent recovery for one compound that resulted in the rejection of data. Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994). The text of this report has been formulated to address only those problem areas affecting data quality.

for

Tetra Tech
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313			MRC-MW63A-040313			MRC-MW70A-040313			MRC-MW70B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6			240-22783-7			240-22783-8			240-22783-9		
FRACTION: OV	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		2.3	U		0.23	U		0.23	U		0.46	U	
1,1,1-TRICHLOROETHANE		2.2	U		0.22	U		0.22	U		0.44	U	
1,1,2,2-TETRACHLOROETHANE		1.8	U		0.18	U		0.18	U		0.36	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		2.8	U		0.28	U		0.28	U		0.56	U	
1,1-DICHLOROETHANE		3.1	J	P	0.15	U		1.3			2.9		
1,1-DICHLOROETHENE		25			0.19	U		0.69	J	P	19		
1,1-DICHLOROPROPENE		1.3	U		0.13	U		0.13	U		0.26	U	
1,2,3-TRICHLOROBENZENE		1.7	U		0.17	U		0.17	U		0.34	U	
1,2,3-TRICHLOROPROPANE		4.3	U		0.43	U		0.43	U		0.86	U	
1,2,3-TRIMETHYLBENZENE		0.059	U		0.0059	U		0.0059	U		0.012	U	
1,2,4-TRICHLOROBENZENE		1.5	U		0.15	U		0.15	U		0.3	U	
1,2,4-TRIMETHYLBENZENE		1.2	U		0.12	U		0.12	U		0.24	U	
1,2-DIBROMO-3-CHLOROPROPANE		6.7	U		0.67	U		0.67	U		1.3	U	
1,2-DIBROMOETHANE		2.4	U		0.24	U		0.24	U		0.48	U	
1,2-DICHLOROBENZENE		1.3	U		0.13	U		0.13	U		0.26	U	
1,2-DICHLOROETHANE		2.2	U		0.22	U		0.22	U		0.44	U	
1,2-DICHLOROPROPANE		1.8	U		0.18	U		0.18	U		0.36	U	
1,3-DICHLOROBENZENE		1.4	U		0.14	U		0.14	U		0.28	U	
1,3-DICHLOROPROPANE		1.6	U		0.16	U		0.16	U		0.32	U	
1,4-DICHLOROBENZENE		1.3	U		0.13	U		0.13	U		0.26	U	
2,2-DICHLOROPROPANE		1.3	U		0.13	U		0.13	U		0.26	U	
2-BUTANONE		5.7	U		0.57	U		0.57	U		1.1	U	
2-CHLOROETHYL VINYL ETHER		9.9	U		0.99	U		0.99	U		2	U	
2-CHLOROTOLUENE		1.1	U		0.11	U		0.11	U		0.22	U	
2-HEXANONE		4.1	U		0.41	U		0.41	U		0.82	U	
4-CHLOROTOLUENE		1.8	U		0.18	U		0.18	U		0.36	U	
4-ISOPROPYLTOLUENE		1.2	U		0.12	U		0.12	U		0.24	U	
4-METHYL-2-PENTANONE		3.2	U		0.32	U		0.32	U		0.64	U	
ACETONE		11	J	P	1.1	U		1.3	J	P	5.6	J	P
BENZENE		3	J	B	0.27	J	B	0.13	J	B	1.2	J	B
BROMOBENZENE		1.3	U		0.13	U		0.13	U		0.26	U	
BROMOCHLOROMETHANE		2.9	U		0.29	U		0.29	U		0.58	U	
BROMODICHLOROMETHANE		1.5	U		0.15	U		0.15	U		0.3	U	
BROMOFORM		6.4	U		0.64	U		0.64	U		1.3	U	
BROMOMETHANE		4.1	U		0.41	U		0.41	U		0.82	U	
CARBON DISULFIDE		1.3	U		0.13	U		0.13	U		0.26	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-71A-040313			MRC-MW-71B-040313			TB-040313		
SDG: 240-22783-1	LAB_ID	240-22783-3			240-22783-2			240-22783-1		
FRACTION: OV	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.77	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.28	J	P	0.73	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.6	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.93	U		0.28	U	
1,1-DICHLOROETHANE		1.4			4.9			0.15	U	
1,1-DICHLOROETHENE		19			52			0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.43	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.57	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		1.4	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.02	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.5	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.4	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		2.2	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.8	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.43	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.77	J	P	0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.6	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.47	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.53	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.43	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.43	U		0.13	U	
2-BUTANONE		0.57	U		1.9	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		3.3	UR	C	0.99	U	
2-CHLOROTOLUENE		0.11	U		0.37	U		0.11	U	
2-HEXANONE		0.41	U		1.4	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.6	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.4	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		1.1	U		0.32	U	
ACETONE		1.1	U		3.7	U		1.1	U	
BENZENE		0.26	J	B	0.43	U		0.13	U	
BROMOBENZENE		0.13	U		0.43	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.97	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.5	U		0.15	U	
BROMOFORM		0.64	U		2.1	U		0.64	U	
BROMOMETHANE		0.41	U		1.4	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.43	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313			MRC-MW63A-040313			MRC-MW70A-040313			MRC-MW70B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6			240-22783-7			240-22783-8			240-22783-9		
FRACTION: OV	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		1.3	U		0.13	U		0.13	U		0.26	U	
CHLOROBENZENE		1.5	U		0.15	U		0.15	U		0.3	U	
CHLORODIBROMOMETHANE		1.8	U		0.18	U		0.18	U		0.36	U	
CHLOROETHANE		2.9	U		0.29	U		0.29	U		0.58	U	
CHLOROFORM		1.6	U		0.16	U		0.16	U		0.32	U	
CHLOROMETHANE		3	U		0.3	U		0.3	U		0.6	U	
CIS-1,2-DICHLOROETHENE		18			0.17	U		1.8			34		
CIS-1,3-DICHLOROPROPENE		1.4	U		0.14	U		0.14	U		0.28	U	
DIBROMOMETHANE		2.8	U		0.28	U		0.28	U		0.56	U	
DICHLORODIFLUOROMETHANE		3.1	UJ	C	0.31	UJ	C	0.31	UJ	C	0.62	UJ	C
DIISOPROPYL ETHER		15	U		1.5	U		1.5	U		3	U	
DIMETHYL ETHER								4	NJ	Z1	2.2	NJ	Z1
ETHYL TERT-BUTYL ETHER		1.1	U		0.11	U		0.11	U		0.22	U	
ETHYLBENZENE		1.7	U		0.17	U		0.17	U		0.34	U	
FORMAMIDE, N-METHYLTHIO								1.1	NJ	Z1			
HEXACHLOROBUTADIENE		3	U		0.3	U		0.3	U		0.6	U	
ISOPROPYLBENZENE		1.3	U		0.13	U		0.13	U		0.26	U	
M+P-XYLENES		2.4	U		0.24	U		0.24	U		0.48	U	
METHYL TERT-BUTYL ETHER		1.7	U		0.17	U		0.17	U		0.34	U	
METHYLENE CHLORIDE		5.4	J	B	0.33	U		0.33	U		0.95	J	B
NAPHTHALENE		2.4	U		0.24	U		0.24	U		0.48	U	
N-BUTYLBENZENE		1.2	U		0.12	U		0.12	U		0.24	U	
N-PROPYLBENZENE		1.4	U		0.14	U		0.14	U		0.28	U	
O-XYLENE		1.4	U		0.14	U		0.14	U		0.28	U	
SEC-BUTYLBENZENE		1.3	U		0.13	U		0.13	U		0.26	U	
STYRENE		1.1	U		0.11	U		0.11	U		0.22	U	
TERT-AMYL METHYL ETHER		0.67	U		0.067	U		0.067	U		0.13	U	
TERT-BUTYLBENZENE		1.3	U		0.13	U		0.13	U		0.26	U	
TERTIARY-BUTYL ALCOHOL		39	UR	C	3.9	UR	C	3.9	UR	C	7.8	UR	C
TETRACHLOROETHENE		2.9	U		0.29	U		0.29	U		0.58	U	
TOLUENE		1.3	U		0.13	U		0.13	U		0.26	U	
TOTAL XYLENES		2.8	U		0.28	U		0.28	U		0.56	U	
TRANS-1,2-DICHLOROETHENE		1.9	U		0.19	U		0.19	U		1.2	J	P
TRANS-1,3-DICHLOROPROPENE		1.9	U		0.19	U		0.19	U		0.38	U	
TRICHLOROETHENE		240			0.18	J	P	1.8			75		
TRICHLOROFLUOROMETHANE		2.1	UJ	C	0.21	UJ	C	0.21	UJ	C	0.42	UJ	C

PROJ_NO: 04795	NSAMPLE	MRC-MW-71A-040313			MRC-MW-71B-040313			TB-040313		
SDG: 240-22783-1	LAB_ID	240-22783-3			240-22783-2			240-22783-1		
FRACTION: OV	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.43	U		0.13	U	
CHLOROBENZENE		0.15	U		0.5	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.6	U		0.18	U	
CHLOROETHANE		0.29	U		0.97	U		0.29	U	
CHLOROFORM		0.16	U		0.53	U		0.16	U	
CHLOROMETHANE		0.3	U		1	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		10			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.47	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.93	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	1	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		5	U		1.5	U	
DIMETHYL ETHER										
ETHYL TERT-BUTYL ETHER		0.11	U		0.37	U		0.11	U	
ETHYLBENZENE		0.17	U		0.57	U		0.17	U	
FORMAMIDE, N-METHYLTHIO										
HEXACHLOROBUTADIENE		0.3	U		1	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.43	U		0.13	U	
M+P-XYLENES		0.24	U		0.8	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.57	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		1.4	J	CP	0.33	U	
NAPHTHALENE		0.24	U		0.8	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.4	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.47	U		0.14	U	
O-XYLENE		0.14	U		0.47	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.43	U		0.13	U	
STYRENE		0.11	U		0.37	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.22	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.43	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	13	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.97	U		0.29	U	
TOLUENE		0.13	U		0.43	U		0.13	U	
TOTAL XYLENES		0.28	U		0.93	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.63	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.63	U		0.19	U	
TRICHLOROETHENE		0.56	J	P	86			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.7	U		0.21	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313			MRC-MW63A-040313			MRC-MW70A-040313			MRC-MW70B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6			240-22783-7			240-22783-8			240-22783-9		
FRACTION: OV	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL ACETATE		1.9	U		0.19	U		0.19	U		0.38	U	
VINYL CHLORIDE		2.2	U		0.22	U		0.22	U		2.5		

PROJ_NO: 04795	NSAMPLE	MRC-MW-71A-040313			MRC-MW-71B-040313			TB-040313		
SDG: 240-22783-1	LAB_ID	240-22783-3			240-22783-2			240-22783-1		
FRACTION: OV	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL ACETATE		0.19	U		0.63	UR	C	0.19	UR	C
VINYL CHLORIDE		0.24	J	P	0.73	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313			MRC-MW63A-040313			MRC-MW70A-040313			MRC-MW70B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6			240-22783-7			240-22783-8			240-22783-9		
FRACTION: OS	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		24			0.47	U		1.7			13		

PROJ_NO: 04795	NSAMPLE	MRC-MW-71A-040313			MRC-MW-71B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-3			240-22783-2		
FRACTION: OS	SAMP_DATE	4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		1.5			16		

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6		
FRACTION: OVG	SAMP_DATE	4/3/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ETHANE		0.1	U	
ETHENE		0.37	U	
METHANE		0.77		

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71A-040313 Lab Sample ID: 240-22783-3

Matrix: Water Lab File ID: UXM7369.D

Analysis Method: 8260B Date Collected: 04/03/2013 12:57

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 16:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.26	J B	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.4		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	19		1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71A-040313 | Lab Sample ID: 240-22783-3

Matrix: Water | Lab File ID: UXM7369.D

Analysis Method: 8260B | Date Collected: 04/03/2013 12:57

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 16:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	0.28	J	1.0	0.22
79-01-6	Trichloroethene	0.56	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.24	J	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71A-040313 | Lab Sample ID: 240-22783-3

Matrix: Water | Lab File ID: UXM7369.D

Analysis Method: 8260B | Date Collected: 04/03/2013 12:57

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 16:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	75		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71A-040313 Lab Sample ID: 240-22783-3

Matrix: Water Lab File ID: UXM7369.D

Analysis Method: 8260B Date Collected: 04/03/2013 12:57

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 16:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71B-040313 Lab Sample ID: 240-22783-2

Matrix: Water Lab File ID: UXC0577.D

Analysis Method: 8260B Date Collected: 04/03/2013 11:32

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 19:20

Soil Aliquot Vol: Dilution Factor: 3.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	17	U	17	3.7
71-43-2	Benzene	3.3	U	3.3	0.43
108-86-1	Bromobenzene	3.3	U	3.3	0.43
74-97-5	Bromochloromethane	3.3	U	3.3	0.97
75-27-4	Bromodichloromethane	3.3	U	3.3	0.50
75-25-2	Bromoform	3.3	U	3.3	2.1
74-83-9	Bromomethane	3.3	U	3.3	1.4
78-93-3	2-Butanone	17	U	17	1.9
75-15-0	Carbon disulfide	3.3	U	3.3	0.43
56-23-5	Carbon tetrachloride	3.3	U	3.3	0.43
108-90-7	Chlorobenzene	3.3	U	3.3	0.50
75-00-3	Chloroethane	3.3	U	3.3	0.97
110-75-8	2-Chloroethyl vinyl ether	33	U	33	3.3
67-66-3	Chloroform	3.3	U	3.3	0.53
74-87-3	Chloromethane	3.3	U	3.3	1.0
95-49-8	2-Chlorotoluene	3.3	U	3.3	0.37
106-43-4	4-Chlorotoluene	3.3	U	3.3	0.60
156-59-2	cis-1,2-Dichloroethene	10		3.3	0.57
10061-01-5	cis-1,3-Dichloropropene	3.3	U	3.3	0.47
124-48-1	Dibromochloromethane	3.3	U	3.3	0.60
96-12-8	1,2-Dibromo-3-Chloropropane	17	U	17	2.2
106-93-4	1,2-Dibromoethane	3.3	U	3.3	0.80
74-95-3	Dibromomethane	3.3	U	3.3	0.93
95-50-1	1,2-Dichlorobenzene	3.3	U	3.3	0.43
541-73-1	1,3-Dichlorobenzene	3.3	U	3.3	0.47
106-46-7	1,4-Dichlorobenzene	3.3	U	3.3	0.43
75-71-8	Dichlorodifluoromethane	3.3	U	3.3	1.0
75-34-3	1,1-Dichloroethane	4.9		3.3	0.50
107-06-2	1,2-Dichloroethane	0.77	J	3.3	0.73
75-35-4	1,1-Dichloroethene	52		3.3	0.63
78-87-5	1,2-Dichloropropane	3.3	U	3.3	0.60
142-28-9	1,3-Dichloropropane	3.3	U	3.3	0.53
594-20-7	2,2-Dichloropropane	3.3	U	3.3	0.43
563-58-6	1,1-Dichloropropene	3.3	U	3.3	0.43
108-20-3	Diisopropyl ether	17	U	17	5.0
100-41-4	Ethylbenzene	3.3	U	3.3	0.57

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71B-040313 | Lab Sample ID: 240-22783-2

Matrix: Water | Lab File ID: UXC0577.D

Analysis Method: 8260B | Date Collected: 04/03/2013 11:32

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 19:20

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	17	U	17	0.37
87-68-3	Hexachlorobutadiene	3.3	U	3.3	1.0
591-78-6	2-Hexanone	17	U	17	1.4
98-82-8	Isopropylbenzene	3.3	U	3.3	0.43
75-09-2	Methylene Chloride	1.4	J	3.3	1.1
108-10-1	4-Methyl-2-pentanone	17	U	17	1.1
1634-04-4	Methyl tert-butyl ether	3.3	U	3.3	0.57
179601-23-1	m-Xylene & p-Xylene	6.7	U	6.7	0.80
91-20-3	Naphthalene	3.3	U	3.3	0.80
104-51-8	n-Butylbenzene	3.3	U	3.3	0.40
103-65-1	n-Propylbenzene	3.3	U	3.3	0.47
95-47-6	o-Xylene	3.3	U	3.3	0.47
99-87-6	p-Isopropyltoluene	3.3	U	3.3	0.40
135-98-8	sec-Butylbenzene	3.3	U	3.3	0.43
100-42-5	Styrene	3.3	U	3.3	0.37
994-05-8	Tert-amyl-methyl ether (TAME)	17	U	17	0.22
75-65-0	tert-Butyl alcohol	67	U	67	13
98-06-6	tert-Butylbenzene	3.3	U	3.3	0.43
630-20-6	1,1,1,2-Tetrachloroethane	3.3	U	3.3	0.77
79-34-5	1,1,2,2-Tetrachloroethane	3.3	U	3.3	0.60
127-18-4	Tetrachloroethene	3.3	U	3.3	0.97
108-88-3	Toluene	3.3	U	3.3	0.43
156-60-5	trans-1,2-Dichloroethene	3.3	U	3.3	0.63
10061-02-6	trans-1,3-Dichloropropene	3.3	U	3.3	0.63
87-61-6	1,2,3-Trichlorobenzene	3.3	U	3.3	0.57
120-82-1	1,2,4-Trichlorobenzene	3.3	U	3.3	0.50
71-55-6	1,1,1-Trichloroethane	3.3	U	3.3	0.73
79-01-6	Trichloroethene	86		3.3	0.57
75-69-4	Trichlorofluoromethane	3.3	U	3.3	0.70
96-18-4	1,2,3-Trichloropropane	3.3	U	3.3	1.4
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	3.3	U	3.3	0.93
526-73-8	1,2,3-Trimethylbenzene	17	U	17	0.020
95-63-6	1,2,4-Trimethylbenzene	3.3	U	3.3	0.40
108-05-4	Vinyl acetate	6.7	U	6.7	0.63
75-01-4	Vinyl chloride	3.3	U	3.3	0.73

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71B-040313 | Lab Sample ID: 240-22783-2

Matrix: Water | Lab File ID: UXC0577.D

Analysis Method: 8260B | Date Collected: 04/03/2013 11:32

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 19:20

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	6.7	U	6.7	0.93

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	93		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71B-040313 | Lab Sample ID: 240-22783-2

Matrix: Water | Lab File ID: UXC0577.D

Analysis Method: 8260B | Date Collected: 04/03/2013 11:32

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 19:20

Soil Aliquot Vol: | Dilution Factor: 3.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Matrix: Water Lab File ID: UXM7370.D

Analysis Method: 8260B Date Collected: 04/03/2013 10:55

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 16:42

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	11	J	50	11
71-43-2	Benzene	3.0	J B	10	1.3
108-86-1	Bromobenzene	10	U	10	1.3
74-97-5	Bromochloromethane	10	U	10	2.9
75-27-4	Bromodichloromethane	10	U	10	1.5
75-25-2	Bromoform	10	U	10	6.4
74-83-9	Bromomethane	10	U	10	4.1
78-93-3	2-Butanone	50	U	50	5.7
75-15-0	Carbon disulfide	10	U	10	1.3
56-23-5	Carbon tetrachloride	10	U	10	1.3
108-90-7	Chlorobenzene	10	U	10	1.5
75-00-3	Chloroethane	10	U	10	2.9
110-75-8	2-Chloroethyl vinyl ether	100	U	100	9.9
67-66-3	Chloroform	10	U	10	1.6
74-87-3	Chloromethane	10	U	10	3.0
95-49-8	2-Chlorotoluene	10	U	10	1.1
106-43-4	4-Chlorotoluene	10	U	10	1.8
156-59-2	cis-1,2-Dichloroethene	18		10	1.7
10061-01-5	cis-1,3-Dichloropropene	10	U	10	1.4
124-48-1	Dibromochloromethane	10	U	10	1.8
96-12-8	1,2-Dibromo-3-Chloropropane	50	U	50	6.7
106-93-4	1,2-Dibromoethane	10	U	10	2.4
74-95-3	Dibromomethane	10	U	10	2.8
95-50-1	1,2-Dichlorobenzene	10	U	10	1.3
541-73-1	1,3-Dichlorobenzene	10	U	10	1.4
106-46-7	1,4-Dichlorobenzene	10	U	10	1.3
75-71-8	Dichlorodifluoromethane	10	U	10	3.1
75-34-3	1,1-Dichloroethane	3.1	J	10	1.5
107-06-2	1,2-Dichloroethane	10	U	10	2.2
75-35-4	1,1-Dichloroethene	25		10	1.9
78-87-5	1,2-Dichloropropane	10	U	10	1.8
142-28-9	1,3-Dichloropropane	10	U	10	1.6
594-20-7	2,2-Dichloropropane	10	U	10	1.3
563-58-6	1,1-Dichloropropene	10	U	10	1.3
108-20-3	Diisopropyl ether	50	U	50	15
100-41-4	Ethylbenzene	10	U	10	1.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Matrix: Water Lab File ID: UXM7370.D

Analysis Method: 8260B Date Collected: 04/03/2013 10:55

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 16:42

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	50	U	50	1.1
87-68-3	Hexachlorobutadiene	10	U	10	3.0
591-78-6	2-Hexanone	50	U	50	4.1
98-82-8	Isopropylbenzene	10	U	10	1.3
75-09-2	Methylene Chloride	5.4	J B	10	3.3
108-10-1	4-Methyl-2-pentanone	50	U	50	3.2
1634-04-4	Methyl tert-butyl ether	10	U	10	1.7
179601-23-1	m-Xylene & p-Xylene	20	U	20	2.4
91-20-3	Naphthalene	10	U	10	2.4
104-51-8	n-Butylbenzene	10	U	10	1.2
103-65-1	n-Propylbenzene	10	U	10	1.4
95-47-6	o-Xylene	10	U	10	1.4
99-87-6	p-Isopropyltoluene	10	U	10	1.2
135-98-8	sec-Butylbenzene	10	U	10	1.3
100-42-5	Styrene	10	U	10	1.1
994-05-8	Tert-amyl-methyl ether (TAME)	50	U	50	0.67
75-65-0	tert-Butyl alcohol	200	U	200	39
98-06-6	tert-Butylbenzene	10	U	10	1.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	2.3
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	1.8
127-18-4	Tetrachloroethene	10	U	10	2.9
108-88-3	Toluene	10	U	10	1.3
156-60-5	trans-1,2-Dichloroethene	10	U	10	1.9
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.9
87-61-6	1,2,3-Trichlorobenzene	10	U	10	1.7
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.5
71-55-6	1,1,1-Trichloroethane	10	U	10	2.2
79-01-6	Trichloroethene	240		10	1.7
75-69-4	Trichlorofluoromethane	10	U *	10	2.1
96-18-4	1,2,3-Trichloropropane	10	U	10	4.3
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	10	U	10	2.8
526-73-8	1,2,3-Trimethylbenzene	50	U	50	0.059
95-63-6	1,2,4-Trimethylbenzene	10	U	10	1.2
108-05-4	Vinyl acetate	20	U	20	1.9
75-01-4	Vinyl chloride	10	U	10	2.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW12B-040313 | Lab Sample ID: 240-22783-6

Matrix: Water | Lab File ID: UXM7370.D

Analysis Method: 8260B | Date Collected: 04/03/2013 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 16:42

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	20	U	20	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Matrix: Water Lab File ID: UXM7370.D

Analysis Method: 8260B Date Collected: 04/03/2013 10:55

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 16:42

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW63A-040313 | Lab Sample ID: 240-22783-7

Matrix: Water | Lab File ID: UXM7371.D

Analysis Method: 8260B | Date Collected: 04/03/2013 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.27	J B	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW63A-040313 | Lab Sample ID: 240-22783-7

Matrix: Water | Lab File ID: UXM7371.D

Analysis Method: 8260B | Date Collected: 04/03/2013 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.18	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW63A-040313 | Lab Sample ID: 240-22783-7

Matrix: Water | Lab File ID: UXM7371.D

Analysis Method: 8260B | Date Collected: 04/03/2013 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	77		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		63-129
2037-26-5	Toluene-d8 (Surr)	85		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW63A-040313 Lab Sample ID: 240-22783-7

Matrix: Water Lab File ID: UXM7371.D

Analysis Method: 8260B Date Collected: 04/03/2013 12:40

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 17:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70A-040313 | Lab Sample ID: 240-22783-8

Matrix: Water | Lab File ID: UXM7372.D

Analysis Method: 8260B | Date Collected: 04/03/2013 14:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.3	J	5.0	1.1
71-43-2	Benzene	0.13	J B	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.8		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.3		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.69	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70A-040313 | Lab Sample ID: 240-22783-8

Matrix: Water | Lab File ID: UXM7372.D

Analysis Method: 8260B | Date Collected: 04/03/2013 14:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.8		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70A-040313 | Lab Sample ID: 240-22783-8

Matrix: Water | Lab File ID: UXM7372.D

Analysis Method: 8260B | Date Collected: 04/03/2013 14:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	75		66-117
1868-53-7	Dibromofluoromethane (Surr)	86		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	84		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70A-040313 Lab Sample ID: 240-22783-8

Matrix: Water Lab File ID: UXM7372.D

Analysis Method: 8260B Date Collected: 04/03/2013 14:05

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 17:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

Number TICs Found: 2 TIC Result Total: 5.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
115-10-6	Dimethyl ether	1.77	4.0	T J N
1000196-87-7	Formamide, N-methylthio	4.60	1.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70B-040313 | Lab Sample ID: 240-22783-9

Matrix: Water | Lab File ID: UXM7373.D

Analysis Method: 8260B | Date Collected: 04/03/2013 15:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.6	J	10	2.2
71-43-2	Benzene	1.2	J B	2.0	0.26
108-86-1	Bromobenzene	2.0	U	2.0	0.26
74-97-5	Bromochloromethane	2.0	U	2.0	0.58
75-27-4	Bromodichloromethane	2.0	U	2.0	0.30
75-25-2	Bromoform	2.0	U	2.0	1.3
74-83-9	Bromomethane	2.0	U	2.0	0.82
78-93-3	2-Butanone	10	U	10	1.1
75-15-0	Carbon disulfide	2.0	U	2.0	0.26
56-23-5	Carbon tetrachloride	2.0	U	2.0	0.26
108-90-7	Chlorobenzene	2.0	U	2.0	0.30
75-00-3	Chloroethane	2.0	U	2.0	0.58
110-75-8	2-Chloroethyl vinyl ether	20	U	20	2.0
67-66-3	Chloroform	2.0	U	2.0	0.32
74-87-3	Chloromethane	2.0	U	2.0	0.60
95-49-8	2-Chlorotoluene	2.0	U	2.0	0.22
106-43-4	4-Chlorotoluene	2.0	U	2.0	0.36
156-59-2	cis-1,2-Dichloroethene	34		2.0	0.34
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	2.0	U	2.0	0.36
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	1.3
106-93-4	1,2-Dibromoethane	2.0	U	2.0	0.48
74-95-3	Dibromomethane	2.0	U	2.0	0.56
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.26
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.28
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.26
75-71-8	Dichlorodifluoromethane	2.0	U	2.0	0.62
75-34-3	1,1-Dichloroethane	2.9		2.0	0.30
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.44
75-35-4	1,1-Dichloroethene	19		2.0	0.38
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.36
142-28-9	1,3-Dichloropropane	2.0	U	2.0	0.32
594-20-7	2,2-Dichloropropane	2.0	U	2.0	0.26
563-58-6	1,1-Dichloropropene	2.0	U	2.0	0.26
108-20-3	Diisopropyl ether	10	U	10	3.0
100-41-4	Ethylbenzene	2.0	U	2.0	0.34

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70B-040313 | Lab Sample ID: 240-22783-9

Matrix: Water | Lab File ID: UXM7373.D

Analysis Method: 8260B | Date Collected: 04/03/2013 15:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	10	U	10	0.22
87-68-3	Hexachlorobutadiene	2.0	U	2.0	0.60
591-78-6	2-Hexanone	10	U	10	0.82
98-82-8	Isopropylbenzene	2.0	U	2.0	0.26
75-09-2	Methylene Chloride	0.95	J B	2.0	0.66
108-10-1	4-Methyl-2-pentanone	10	U	10	0.64
1634-04-4	Methyl tert-butyl ether	2.0	U	2.0	0.34
179601-23-1	m-Xylene & p-Xylene	4.0	U	4.0	0.48
91-20-3	Naphthalene	2.0	U	2.0	0.48
104-51-8	n-Butylbenzene	2.0	U	2.0	0.24
103-65-1	n-Propylbenzene	2.0	U	2.0	0.28
95-47-6	o-Xylene	2.0	U	2.0	0.28
99-87-6	p-Isopropyltoluene	2.0	U	2.0	0.24
135-98-8	sec-Butylbenzene	2.0	U	2.0	0.26
100-42-5	Styrene	2.0	U	2.0	0.22
994-05-8	Tert-amyl-methyl ether (TAME)	10	U	10	0.13
75-65-0	tert-Butyl alcohol	40	U	40	7.8
98-06-6	tert-Butylbenzene	2.0	U	2.0	0.26
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	0.46
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.36
127-18-4	Tetrachloroethene	2.0	U	2.0	0.58
108-88-3	Toluene	2.0	U	2.0	0.26
156-60-5	trans-1,2-Dichloroethene	1.2	J	2.0	0.38
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.38
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	0.34
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	0.30
71-55-6	1,1,1-Trichloroethane	2.0	U	2.0	0.44
79-01-6	Trichloroethene	75		2.0	0.34
75-69-4	Trichlorofluoromethane	2.0	U *	2.0	0.42
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	0.86
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	2.0	U	2.0	0.56
526-73-8	1,2,3-Trimethylbenzene	10	U	10	0.012
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	0.24
108-05-4	Vinyl acetate	4.0	U	4.0	0.38
75-01-4	Vinyl chloride	2.5		2.0	0.44

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70B-040313 Lab Sample ID: 240-22783-9

Matrix: Water Lab File ID: UXM7373.D

Analysis Method: 8260B Date Collected: 04/03/2013 15:30

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 17:49

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	4.0	U	4.0	0.56

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70B-040313 | Lab Sample ID: 240-22783-9

Matrix: Water | Lab File ID: UXM7373.D

Analysis Method: 8260B | Date Collected: 04/03/2013 15:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 17:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 2.2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
115-10-6	Dimethyl ether	1.77	2.2	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: TB-040313 | Lab Sample ID: 240-22783-1

Matrix: WQ | Lab File ID: UXC0576.D

Analysis Method: 8260B | Date Collected: 04/03/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 18:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: TB-040313 | Lab Sample ID: 240-22783-1

Matrix: WQ | Lab File ID: UXC0576.D

Analysis Method: 8260B | Date Collected: 04/03/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 18:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: TB-040313 Lab Sample ID: 240-22783-1

Matrix: WQ Lab File ID: UXC0576.D

Analysis Method: 8260B Date Collected: 04/03/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	91		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: TB-040313 Lab Sample ID: 240-22783-1

Matrix: WQ Lab File ID: UXC0576.D

Analysis Method: 8260B Date Collected: 04/03/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 18:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71A-040313 | Lab Sample ID: 240-22783-3

Matrix: Water | Lab File ID: 30412022.D

Analysis Method: 8270D | Date Collected: 04/03/2013 12:57

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1050(mL) | Date Analyzed: 04/12/2013 18:52

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.5		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		20-110
367-12-4	2-Fluorophenol (Surr)	42		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	35		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	63		21-110
4165-62-2	Phenol-d5 (Surr)	43		21-110
1718-51-0	Terphenyl-d14 (Surr)	56		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW--71B-040313 | Lab Sample ID: 240-22783-2

Matrix: Water | Lab File ID: 30412023.D

Analysis Method: 8270D | Date Collected: 04/03/2013 11:32

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1010(mL) | Date Analyzed: 04/12/2013 19:16

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	16		0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		20-110
367-12-4	2-Fluorophenol (Surr)	29		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	26		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	55		21-110
4165-62-2	Phenol-d5 (Surr)	33		21-110
1718-51-0	Terphenyl-d14 (Surr)	61		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW12B-040313 | Lab Sample ID: 240-22783-6

Matrix: Water | Lab File ID: 30412018.D

Analysis Method: 8270D | Date Collected: 04/03/2013 10:55

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1010(mL) | Date Analyzed: 04/12/2013 17:15

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	24		0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	36		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	39		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	68		21-110
4165-62-2	Phenol-d5 (Surr)	42		21-110
1718-51-0	Terphenyl-d14 (Surr)	68		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW63A-040313 | Lab Sample ID: 240-22783-7

Matrix: Water | Lab File ID: 30412019.D

Analysis Method: 8270D | Date Collected: 04/03/2013 12:40

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1050(mL) | Date Analyzed: 04/12/2013 17:40

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	56		20-110
367-12-4	2-Fluorophenol (Surr)	49		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	46		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	51		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70A-040313 | Lab Sample ID: 240-22783-8

Matrix: Water | Lab File ID: 30412020.D

Analysis Method: 8270D | Date Collected: 04/03/2013 14:05

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1000(mL) | Date Analyzed: 04/12/2013 18:04

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.7		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		20-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	44		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	63		21-110
4165-62-2	Phenol-d5 (Surr)	48		21-110
1718-51-0	Terphenyl-d14 (Surr)	53		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW70B-040313 | Lab Sample ID: 240-22783-9

Matrix: Water | Lab File ID: 30412021.D

Analysis Method: 8270D | Date Collected: 04/03/2013 15:30

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1000(mL) | Date Analyzed: 04/12/2013 18:28

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	13		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		20-110
367-12-4	2-Fluorophenol (Surr)	45		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	41		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	64		21-110
4165-62-2	Phenol-d5 (Surr)	44		21-110
1718-51-0	Terphenyl-d14 (Surr)	43		24-110

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Matrix: Water Lab File ID: Z0040814.D

Analysis Method: RSK-175 Date Collected: 04/03/2013 10:55

Sample wt/vol: 17(mL) Date Analyzed: 04/08/2013 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80968 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.77		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	96		40-122

Appendix C

Support Documentation

HOLDTIME

SDG 240-22783-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW--68A-040313	240-22783-5	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW--67A-040313	240-22783-4	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/23/2013	4/23/2013	20	0	20
HG	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/9/2013	4/10/2013	6	1	7
M	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW--67A-040313	240-22783-4	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW--68A-040313	240-22783-5	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/9/2013	4/11/2013	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/11/2013	4/11/2013	8	0	8
CL	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
DOC	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/12/2013	4/12/2013	9	0	9
NH3	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/11/2013	4/11/2013	8	0	8
NTA	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
NTI	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
OPO4	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
PCS	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/5/2013	4/5/2013	2	0	2
SO4	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
OS	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW70B-040313	240-22783-9	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OV	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	TB-040313	240-22783-1	NM	4/3/2013	4/9/2013	4/9/2013	6	0	6
OV	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/9/2013	4/9/2013	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	MRC-MW70B-040313	240-22783-9	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
ETHA	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5
ETHE	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5
METH	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5
OVG	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-22783-1

Job Description: MRC - GROUNDWATER SAMPLING

For:
Tetra Tech, Inc
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Tony Apanavage

Approved for release.
John McFadden
Project Manager I
4/25/2013 4:49 PM

John McFadden
Project Manager I
john.mcfadden@testamericainc.com
04/25/2013

cc: Samantha Brenner
Vanessa Good
Mike Martin
Dev Murali
Tobrena Sedlmyer
Final Data Tracking

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Laboratories, Inc.
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CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC - GROUNDWATER SAMPLING

Report Number: 240-22783-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury (samples 2, 3, 4, 5, 7 & 8 only for mercury) analysis were performed at the TestAmerica Irvine Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/04/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.0 and 1.2 C.

Sample MRC-MW70B-040313 is marked for VOCs and Metals on the COC, however, the lab received volume for VOCs and 1,4-Dioxane. The laboratory will log sample MRC-MW70B-040313 for VOCs and 1,4-Dioxane per volume received.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-040313 (240-22783-1), MRC-MW--71B-040313 (240-22783-2), MRC-MW--71A-040313 (240-22783-3), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7), MRC-MW70A-040313 (240-22783-8) and MRC-MW70B-040313 (240-22783-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/09/2013 and 04/10/2013.

Methylene Chloride was detected in method blank MB 240-81347/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Benzene was detected in method blank MB 240-81347/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MRC-MW--71B-040313MS/MSD (240-22783-2) in batch 240-81120.

Samples MRC-MW--71B-040313 (240-22783-2)[3.33X], MRC-MW12B-040313 (240-22783-6)[10X] and MRC-MW70B-040313 (240-22783-9)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample(LCS) for batch 81347 exceeded control limits for the following analyte(s): Trichlorofluoromethane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW--71B-040313 (240-22783-2), MRC-MW--71A-040313 (240-22783-3), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7), MRC-MW70A-040313 (240-22783-8) and MRC-MW70B-040313 (240-22783-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/09/2013 and analyzed on 04/12/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/08/2013.

No difficulties were encountered during the dissolved gases analysis. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/09/2013 and analyzed on 04/11/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-81088/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW--71B-040313 (240-22783-2), MRC-MW--71A-040313 (240-22783-3), MRC-MW--67A-040313 (240-22783-4), MRC-MW--68A-040313 (240-22783-5), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7) and MRC-MW70A-040313 (240-22783-8) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/17/2013 and analyzed on 04/18/2013.

Barium and Cobalt were detected in method blank MB 440-98850/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Nickel and Zinc failed the recovery criteria low for the MS of sample MRC-MW--68A-040313MS (240-22783-5) in batch 440-99213. Barium, Beryllium and Cobalt failed the recovery criteria high.

Nickel and Zinc failed the recovery criteria low for the MSD of sample MRC-MW--68A-040313MSD (240-22783-5) in batch 440-99213. Beryllium failed the recovery criteria high.

Samples MRC-MW--67A-040313 (240-22783-4)[100X] and MRC-MW--68A-040313 (240-22783-5)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The matrix spike / matrix spike duplicate (MS/MSD) percent recoveries for batch 440-98850 were outside control limits for Be. This is attributed to matrix interferences.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW--71B-040313 (240-22783-2), MRC-MW--71A-040313 (240-22783-3), MRC-MW--67A-040313 (240-22783-4), MRC-MW--68A-040313 (240-22783-5), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7) and MRC-MW70A-040313 (240-22783-8) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/09/2013, 04/19/2013 and 04/23/2013 and analyzed on 04/10/2013, 04/19/2013 and 04/23/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 04/05/2013.

No difficulties were encountered during the TDS analysis. All quality control parameters were within the acceptance limits.

ANIONS
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/04/2013.

Nitrate as N and Orthophosphate as P failed the recovery criteria high for the MS of sample MRC-MW12B-040313MS (240-22783-6) in

batch 240-80671.

The continuing calibration verification (CCV) for orthophosphate associated with batch 80671 recovered above the upper control limit. The sample associated with this CCV was non-detect for the affected analyte; therefore, the data has been reported.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ANIONS
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/04/2013.

Chloride and Sulfate failed the recovery criteria high for the MS of sample MRC-MW12B-040313MS (240-22783-6) in batch 240-80670.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ALKALINITY
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/11/2013.

No difficulties were encountered during the alkalinity analysis. All quality control parameters were within the acceptance limits.

AMMONIA
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/11/2013.

Ammonia (as N) was detected in method blank MB 240-81587/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the ammonia analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON
Sample MRC-MW12B-040313 (240-22783-6) was analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/12/2013.

No difficulties were encountered during the TOC analysis. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC - GROUNDWATER SAMPLING

TestAmerica Job ID: 240-22783-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
RSK-175	Dissolved Gases (GC)	RSK	TAL CAN
6010C	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL IRV
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9060	Organic Carbon, Dissolved (DOC)	SW846	TAL CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC - GROUNDWATER SAMPLING

TestAmerica Job ID: 240-22783-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22783-1	TB-040313	WQ	04/03/13 00:00	04/04/13 09:15
240-22783-2	MRC-MW--71B-040313	Water	04/03/13 11:32	04/04/13 09:15
240-22783-3	MRC-MW--71A-040313	Water	04/03/13 12:57	04/04/13 09:15
240-22783-4	MRC-MW--67A-040313	Water	04/03/13 14:40	04/04/13 09:15
240-22783-5	MRC-MW--68A-040313	Water	04/03/13 15:39	04/04/13 09:15
240-22783-6	MRC-MW12B-040313	Water	04/03/13 10:55	04/04/13 09:15
240-22783-7	MRC-MW63A-040313	Water	04/03/13 12:40	04/04/13 09:15
240-22783-8	MRC-MW70A-040313	Water	04/03/13 14:05	04/04/13 09:15
240-22783-9	MRC-MW70B-040313	Water	04/03/13 15:30	04/04/13 09:15

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanayage	Site Contact: Walt Payon	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9693	1 of 1 COCs
City/State/Zip: Germantown, MD	Email:	Analysis Turnaround Time (in BUS days)		
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC-Ground Water Sampling	Method of Shipment/Carrier: Fed EX			
Project Number: 112IC04795-02	Shipping/Tracking No:			
PO#				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C) Grab (G)	VOCs	Total metals	1,4 Dioxane	Dissolved gasses	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Hg, Na, Si, Zn	DOC			Sample Specific Notes / Special Instructions:
TB-040313	4-3-13	—		X						2					N	G	X										
MRC-MW-71B-040313	↓	1132		↓				2	1	3							X	X	X								
MRC-MW-71A-040313	↓	1257		↓				2	1	3							X	X	X								
MRC-MW-67A-040313	↓	1440		↓					1									X									
MRC-MW-69A-040313	↓	1539		↓					3									X									* MS/MSD
MRC-MW 12B-040313	↓	1055		↓				3	2	5			3				X	X	X	X	X	X	X	X			
MRC-MW 63A-040313	↓	1240		↓					1	3			2				X	X	X								
MRC-MW 70A-040313	↓	1405		↓					1	3			2				X	X	X								
MRC-MW 70B-040313	↓	1530		↓						3			2				X	X									

240-22783 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	4-3-13 / 1615	[signature]	TestAmerica	4/3/13/1620
[signature]	TestAmerica	4/3/13 / 1710	[signature]	TAC	4/4/13 915

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TAL-0018 (1008)

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22783

Client TETRA TECH Site Name _____ By: _____ (Signature)

Cooler Received on 4-4-13 Opened on 4-4-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1 (CF 0°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

IR GUN# 4G (CF +1°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

IR GUN# 5G (CF +1 °C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

IR GUN# 8 (CF +1°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

☐ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 ea	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM JWM Date 4/4/13 by TB via Verbal (Voice Mail) Other

Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

MRC-MW70B-040313 COC = Total Metals, Rec'd 2e for 1,4-Dioxane, no metals bottle - will log for 1,4-Dioxane, not metals

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
	pH Strip Lot# HC256691		
1132	<2	4-4-13	TLS
1257	<2	"	"
1440	<2	"	"
1539	<2 <2 <2	"	"
1055	<2 <2 <2	"	"
1240	<2	"	"
1405	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client cooler	0.2	1.2	5G	ICE
CLIENT cooler	1.0	1.0	5G	ICE

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22783-1

Login Number: 22783
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/05/13 01:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22783-1

Login Number: 22783
List Number: 2
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/05/13 01:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-040313	240-22783-1	91	104	86	86
MRC-MW--71B-040313	240-22783-2	87	104	93	86
MRC-MW--71A-040313	240-22783-3	84	88	83	75
MRC-MW12B-040313	240-22783-6	87	92	87	77
MRC-MW63A-040313	240-22783-7	87	93	85	77
MRC-MW70A-040313	240-22783-8	86	92	84	75
MRC-MW70B-040313	240-22783-9	90	93	89	78
	MB 240-81120/5	88	98	86	82
	MB 240-81347/6	84	88	86	79
	LCS 240-81120/4	94	97	96	104
	LCS 240-81347/4	87	87	92	90
MRC-MW--71B-040313 MS	240-22783-2 MS	90	95	98	107
	240-22773-G-1 MS	88	87	92	91
MRC-MW--71B-040313 MSD	240-22783-2 MSD	96	97	94	104
	240-22773-G-1 MSD	87	85	90	89

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/04/2013 11:03

Analysis Batch Number: 80603 End Date: 04/04/2013 22:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-80603/1		04/04/2013 11:03	1	BFB102C.D	DB-624 0.18(mm)
STD8260 240-80603/2 IC		04/04/2013 12:03	1	UXC0373A.D	DB-624 0.18(mm)
STD8260 240-80603/3 IC		04/04/2013 12:26	1	UXC0374.D	DB-624 0.18(mm)
STD8260 240-80603/4 ICIS		04/04/2013 12:49	1	UXC0375.D	DB-624 0.18(mm)
STD8260 240-80603/5 IC		04/04/2013 13:11	1	UXC0376.D	DB-624 0.18(mm)
STD8260 240-80603/6 IC		04/04/2013 13:33	1	UXC0377.D	DB-624 0.18(mm)
STD8260 240-80603/7 IC		04/04/2013 13:56	1	UXC0378.D	DB-624 0.18(mm)
STD 240-80603/8 IC		04/04/2013 14:18	1	UXC0379.D	DB-624 0.18(mm)
STD 240-80603/9 IC		04/04/2013 14:41	1	UXC0380.D	DB-624 0.18(mm)
STD 240-80603/10 IC		04/04/2013 15:03	1	UXC0381.D	DB-624 0.18(mm)
STD 240-80603/11 IC		04/04/2013 15:25	1	UXC0382.D	DB-624 0.18(mm)
STD 240-80603/12 IC		04/04/2013 15:47	1	UXC0383.D	DB-624 0.18(mm)
STD 240-80603/13 IC		04/04/2013 16:10	1	UXC0384.D	DB-624 0.18(mm)
ICV 240-80603/14		04/04/2013 16:32	1	UXC0385.D	DB-624 0.18(mm)
ZZZZZ		04/04/2013 16:54	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 17:16	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:01	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:23	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:45	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:08	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:30	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:52	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:15	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:37	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:59	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:21	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:44	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:06	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:28	1		DB-624 0.18(mm)
LODV 240-80603/31		04/04/2013 22:51	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
Acrolein	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	0.0383	0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
Acetonitrile	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		0.0282				12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Lin1	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
Tetrahydrofuran	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	0.0478							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
1,4-Dioxane	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	0.0028							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Lin1	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Lin1	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	54281 2671351	111647	315472	612270	1320135	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	87221 2932821	171156	410136	755402	1490257	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	90084 3646043	174429	448535	910427	1815619	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	60792	123523	309237	536745	1288825	1.00	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	57222 1939853	108559	259106	503212	1172903	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	85003 4007156	163491	436047	852366	1900520	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Qua	60508 2188395	142315	363468	562867	1175631	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	50825 2444441	103328	272671	516040	1068324	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	36448 1965522	70005	209727	411728	882332	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Qua	41437 707021	54698	130552	219202	443563	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	71808 3589348	144182	380440	762887	1596939	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	107608 5647776	193818	557304	1163932	2592649	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	44235	90109	214088	397796	877589	10.0	20.0	50.0	100	200
Methyl acetate	FB	Ave	52519 1976826	87258	254849	511378	993247	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	103727 2411358	139915	331483	632624	1217366	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	27571	58766	150997	304259	621537	20.0	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	26338 1008263	53653	138026	289578	566046	2.00 80.0	4.00	10.0	20.0	40.0
trans-1,2-Dichloroethene	FB	Ave	54053 2492750	94410	275110	588790	1164317	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	92573 4302100	174821	496470	1010488	2110142	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10883 485484	16430	48173	112324	216056	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	87778 3973500	158005	441003	945915	1830936	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	5416 303463	9742	29528	62456	121528	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	40729 2026035	70603	211764	439337	958452	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	54689 2595845	103777	294324	624550	1235730	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	30308 1104785	51621	152213	279716	563899	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	24281 1106320	48133	127148	278570	538571	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Lin1	10888 319926	15290	39623	86873	163343	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	80202 3998867	157292	441301	941809	1851795	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	56213 3044165	104528	314700	681095	1462118	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	78582 3822610	139736	420731	898434	1856621	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	61215 3214457	115424	334111	744542	1451922	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	41142 2561023	77991	242269	544212	1198439	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	210583 9670976	383345	1067319	2273858	4388571	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	66913 2673503	108050	308705	671722	1252574	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	50741 2415156	88207	262506	574270	1096701	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	74811 3648018	121816	371567	833848	1749289	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43481 2147458	82744	233906	492649	972957	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	23148 1101620	41437	133579	275319	534465	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	14368	28653	97278	207802	456726	50.0	100	250	500	1000
Bromodichloromethane	FB	Ave	38268 2483374	70762	215959	529245	1075797	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	31897 1878072	61728	169791	409951	819145	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Lin1	37843 2705668	68349	228889	562927	1150799	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	44600 2223643	80981	221149	512791	1050664	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	192498 10374585	335635	999248	2282849	4486991	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Lin1	25269 2080220	51284	172879	407902	869904	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Lin1	25909 1851096	48026	164320	401441	798354	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	31689 1487736	54791	172079	370752	691165	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	38043 1831312	71087	194819	431900	856200	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	59219 2704806	105584	300304	676120	1234250	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	23039 1416027	57319	144925	312066	653134	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Lin1	20266 1548407	42630	128097	301937	664794	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	27236 1456100	53404	152421	361744	684048	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	128109 5933185	224744	643524	1426894	2761984	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	29934 1818217	57601	166423	410673	872956	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	60118 3286200	114605	331842	783064	1523252	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	284699 14564382	549834	1660008	3926757	7840413	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	67420 3937106	142693	412176	946532	1975850	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Lin1	101493 6778584	210975	658962	1548148	3197923	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Lin1	10452 767541	21784	62233	147934	347777	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	155504 9591628	340910	1000915	2337960	4939757	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	50441 2309180	95029	261383	617538	1223028	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	39047 1592000	73074	205973	445045	906648	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	13620 504429	23883	63279	138117	272793	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Qua	2707 329232	5468	21841	51724	129761	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	45505 2418232	90052	270063	624441	1287610	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	45554 2145247	87171	274367	597254	1192754	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	120337 6969911	247280	841365	1967217	4057094	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	146149 7528191	286215	866599	1963537	3979571	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	103890 5808396	212316	670083	1602636	3366304	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	137002 6876405	281254	863051	1948323	4185655	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	153633 7845243	321691	997810	2334194	4909841	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	89119 4102465	180680	535145	1149747	2387647	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	139202 6513520	270484	848693	1973526	4232714	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	106686 4402295	198448	567289	1183375	2557289	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	89974 3596503	177459	512209	1107802	2355646	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	120138 5604065	239383	755792	1739079	3855247	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	3345 142316	8314	17478	46449	108470	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	58960 1681448	122026	348074	738521	1576326	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	34405	77932	237398	506103	1149600	1.00	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	32254	64187	168517	342493	703195	1.00	2.00	5.00	10.0	20.0
Naphthalene	DCB	Linl	52421	123293	423179	987933	2251541	1.00	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	30231	73879	209875	444919	891163	1.00	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	46392 2012983	80652	215581	469566	930548	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	48086 2122132	87655	245590	504909	983002	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	161255 8213858	289151	813532	1855747	3699236	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	49303 2321526	96796	263742	561374	1193146	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Linl = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.9601 0.7242	0.9050	0.8719	0.8759	0.8132	Ave		0.8584				9.5		15.0			
Ethyl ether	0.3412 0.2934	0.3226	0.3378	0.3107	0.3010	Ave		0.3178				6.1		15.0			
3-Chloro-1-propene	0.1577 0.1521	0.1355	0.1441	0.1436	0.1526	Ave		0.1476				5.4		15.0			
Diisopropyl ether	0.2710 0.3092	0.2719	0.2883	0.2894	0.3057	Ave		0.2893				5.6		15.0			
2-Chloro-1,3-butadiene	0.5134 0.5286	0.4490	0.5190	0.5156	0.5192	Ave		0.5075				5.7		15.0			
Ethyl-t-butyl ether (ETBE)	0.5996 0.6507	0.6278	0.6422	0.6520	0.6730	Ave		0.6409				3.9		15.0			
Ethyl acetate	0.1671 0.1520	0.1351	0.1372	0.1445	0.1460	Ave		0.1470				7.9		15.0			
Propionitrile	0.0279 0.0276	0.0303	0.0278	0.0267	0.0286	Ave		0.0282				4.4		15.0			
Methacrylonitrile	0.1142 0.1154	0.1292	0.1216	0.1061	0.1151	Ave		0.1169				6.7		15.0			
Isobutyl alcohol	0.0041 0.0040	0.0039	0.0038	0.0045	0.0043	Ave		0.0041				6.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4454 0.5069	0.4734	0.4860	0.4960	0.5048	Ave		0.4854				4.8		15.0			
n-Heptane	0.0775 0.0685	0.0576	0.0627	0.0688	0.0669	Ave		0.0670				10.0		15.0			
n-Butanol	0.0026 0.0025	0.0026	0.0028	0.0029	0.0027	Ave		0.0027				5.4		15.0			
Methyl methacrylate	0.1572 0.1432	0.1218	0.1256	0.1264	0.1350	Ave		0.1349				9.9		15.0			
2-Nitropropane	0.0187 0.0239	0.0191	0.0171	0.0186	0.0192	Ave		0.0194				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0812 0.0946	0.0685	0.0862	0.0895	0.0990	Ave		0.0865				12.0		15.0			
1,2,3-Trimethylbenzene	2.5686 3.4874	2.5916	3.0529	3.0965	3.4820	Ave		3.0465				13.0		15.0			
2-Methylnaphthalene	0.2129 0.6051	0.2387	0.2880	0.4178	0.5799	Qua	-1.627	0.5468	0.0010						0.9970		0.9900
n-Butyl acetate	0.1485 0.2372	0.1744	0.1786	0.2091	0.2206	Lin1	-0.239	0.2320							0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD, RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	128219 4759915	238116	610234	1264054	2494089	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	45562 1928356	84876	236417	448404	923122	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	21063 999436	35650	100832	207287	467983	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	180962 10162124	357680	1008699	2088661	4688601	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	68560 3474271	118133	363216	744180	1592517	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	80083 4276942	165169	449491	940958	2064046	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	44621 1997979	71082	192095	417144	895470	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	7461 362543	15955	38878	77078	175368	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	15246 758391	34000	85112	153143	352988	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	11078 528247	20382	53350	128473	262747	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	59486 3331366	124564	340138	715830	1548164	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	10356 449987	15157	43911	99327	205046	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	6884 326800	13603	38627	83049	168061	20.0 800	40.0	100	200	400
Methyl methacrylate	FB	Ave	20992 941114	32055	87919	182417	414030	1.00 40.0	2.00	5.00	10.0	20.0
2-Nitropropane	FB	Ave	5003 313582	10051	23899	53814	117630	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Ave	34436 2080247	59435	195715	457197	1003722	10.0 400	20.0	50.0	100	200

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCB	Ave	108979 7668023	224868	693285	1581338	3531405	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCB	Qua	18063 2660872	41419	130820	426780	1176215	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Lin1	39654 3118307	91759	249952	603511	1353022	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3734		1.00	0.0100	-4.4	50.0
Chloromethane	Ave	0.5133	0.5639	0.1000	1.00	0.0100	9.9	50.0
Vinyl chloride	Ave	0.5765	0.6098		1.00	0.0100	5.8	20.0
Bromomethane	Ave	0.3951	0.3863		1.00	0.0100	-2.2	50.0
Chloroethane	Ave	0.3438	0.3863		1.00	0.0100	12.4	50.0
Trichlorofluoromethane	Ave	0.5693	0.6223		1.00	0.0100	9.3	50.0
Acrolein	Qua		0.0606		20.0	0.0300	48.3	50.0
1,1-Dichloroethene	Ave	0.3445	0.4197		1.00	0.0100	21.8*	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3676		1.00	0.0100	39.7	50.0
Acetone	Qua		0.0747		10.0	0.0200	-0.2	50.0
Iodomethane	Ave	0.4958	0.6219		1.00	0.0100	25.4	50.0
Carbon disulfide	Ave	0.7463	1.004		1.00	0.0100	34.5	50.0
Acetonitrile	Ave	0.0282	0.0333		20.0	0.0300	18.3	50.0
Methyl acetate	Ave	0.1586	0.1827		10.0	0.0100	15.2	50.0
Methylene Chloride	Lin1		0.4258		1.00	0.0100	11.5	50.0
tert-Butyl alcohol	Ave	0.0097	0.0098		50.0	0.200	1.3	50.0
Acrylonitrile	Ave	0.0871	0.0938		20.0	0.0300	7.6	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3791		1.00	0.0100	6.2	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6624		1.00	0.0100	4.9	50.0
Hexane	Ave	0.0668	0.0850		1.00	0.0100	27.3*	20.0
1,1-Dichloroethane	Ave	0.5749	0.6173	0.1000	1.00	0.0100	7.4	50.0
Vinyl acetate	Ave	0.0383	0.0347		2.00	0.0100	-9.4	50.0
2,2-Dichloropropane	Ave	0.2770	0.2681		1.00	0.0100	-3.2	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4011		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0883		10.0	0.0200	-3.0	50.0
Bromochloromethane	Ave	0.1662	0.1613		1.00	0.0100	-3.0	50.0
Tetrahydrofuran	Lin1		0.0486		5.00	0.0100	-3.0	50.0
Chloroform	Ave	0.5671	0.6009		1.00	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4343		1.00	0.0100	5.4	50.0
Cyclohexane	Ave	0.5423	0.6246		1.00	0.0100	15.2	50.0
1,1-Dichloropropene	Ave	0.4381	0.4705		1.00	0.0100	7.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3480		1.00	0.0100	7.3	50.0
Benzene	Ave	1.387	1.441		1.00	0.0100	3.9	50.0
1,2-Dichloroethane	Ave	0.4040	0.4058		1.00	0.0100	0.4	50.0
Trichloroethene	Ave	0.3397	0.3347		1.00	0.0100	-1.5	50.0
Methylcyclohexane	Ave	0.5006	0.5473		1.00	0.0100	9.3	50.0
1,2-Dichloropropane	Ave	0.3010	0.2966		1.00	0.0100	-1.5	20.0
Dibromomethane	Ave	0.1618	0.1715		1.00	0.0100	6.0	50.0
Bromodichloromethane	Ave	0.3013	0.3059		1.00	0.0100	1.5	50.0
2-Chloroethyl vinyl ether	Ave	0.1193	0.1081		10.0	0.0100	-9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.2826		1.00	0.0100	-20.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1608		10.0	0.0200	5.0	50.0
Toluene	Ave	2.028	2.055		1.00	0.0100	1.3	20.0
trans-1,3-Dichloropropene	Lin1		0.3234		1.00	0.0100	-20.9	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3026		1.00	0.0100	-6.4	50.0
Tetrachloroethene	Ave	0.3905	0.3729		1.00	0.0100	-4.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5712		1.00	0.0100	-3.2	50.0
2-Hexanone	Ave	0.1436	0.1562		10.0	0.0200	8.8	50.0
Dibromochloromethane	Lin1		0.2410		1.00	0.0100	-21.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.3045		1.00	0.0100	-0.1	50.0
Chlorobenzene	Ave	1.276	1.287	0.3000	1.00	0.0100	0.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3671		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.7059		1.00	0.0100	5.4	20.0
m-Xylene & p-Xylene	Ave	1.626	1.762		2.00	0.0200	8.3	50.0
o-Xylene	Ave	0.8173	0.9066		1.00	0.0100	10.9	50.0
Styrene	Lin1		1.454		1.00	0.0100	-0.1	50.0
Bromoform	Lin1		0.1234	0.1000	1.00	0.0100	-20.3	50.0
Isopropylbenzene	Ave	1.984	2.244		1.00	0.0100	13.1	50.0
Bromobenzene	Ave	0.9263	0.8726		1.00	0.0100	-5.8	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6194	0.3000	1.00	0.0100	-10.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1915		1.00	0.0100	-13.2	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0862		1.00	0.0200	-7.6	50.0
n-Propylbenzene	Ave	0.9249	0.9564		1.00	0.0100	3.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8704		1.00	0.0100	-1.6	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.869		1.00	0.0100	5.1	50.0
4-Chlorotoluene	Ave	2.918	2.862		1.00	0.0100	-1.9	50.0
tert-Butylbenzene	Ave	2.268	2.336		1.00	0.0100	3.0	50.0
1,2,4-Trimethylbenzene	Ave	2.853	3.027		1.00	0.0100	6.1	50.0
sec-Butylbenzene	Ave	3.298	3.499		1.00	0.0100	6.1	50.0
1,3-Dichlorobenzene	Ave	1.741	1.755		1.00	0.0100	0.8	50.0
p-Isopropyltoluene	Ave	2.821	3.116		1.00	0.0100	10.5	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.709		1.00	0.0100	2.1	50.0
n-Butylbenzene	Ave	2.489	2.779		1.00	0.0100	11.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0607		2.00	0.0100	-11.4	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7228		1.00	0.0100	-4.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4851		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.287		1.00	0.0100	-16.2	50.0
1,2,3-Trichlorobenzene	Ave	0.6565	0.6321		1.00	0.0100	-3.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.3017		0.00858	0.00890	-3.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.667	1.608		0.00858	0.00890	-3.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5350		0.00918	0.00890	3.1	50.0

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/09/2013 09:53

Analysis Batch Number: 81120 End Date: 04/09/2013 20:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-81120/1		04/09/2013 09:53	1	BFB106A.D	DB-624 0.18(mm)
CCVIS 240-81120/2		04/09/2013 10:18	1	UXC0553.D	DB-624 0.18(mm)
CCV 240-81120/3		04/09/2013 10:40	1	UXC0554.D	DB-624 0.18(mm)
LCS 240-81120/4		04/09/2013 11:03	1	UXC0555.D	DB-624 0.18(mm)
MB 240-81120/5		04/09/2013 11:48	1	UXC0557.D	DB-624 0.18(mm)
ZZZZZ		04/09/2013 12:11	7500000		DB-624 0.18(mm)
ZZZZZ		04/09/2013 12:34	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 12:56	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 13:19	20		DB-624 0.18(mm)
ZZZZZ		04/09/2013 13:42	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 14:05	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 14:27	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 14:50	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 15:12	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 15:35	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 15:57	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 16:20	55.56		DB-624 0.18(mm)
ZZZZZ		04/09/2013 16:43	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 17:06	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 17:28	1		DB-624 0.18(mm)
ZZZZZ		04/09/2013 17:51	28.57		DB-624 0.18(mm)
ZZZZZ		04/09/2013 18:13	33.33		DB-624 0.18(mm)
ZZZZZ		04/09/2013 18:36	166.67		DB-624 0.18(mm)
240-22783-1	TB-040313	04/09/2013 18:58	1	UXC0576.D	DB-624 0.18(mm)
240-22783-2	MRC-MW--71B-040313	04/09/2013 19:20	3.33	UXC0577.D	DB-624 0.18(mm)
240-22783-2 MS	MRC-MW--71B-040313 MS	04/09/2013 19:42	3.33	UXC0578.D	DB-624 0.18(mm)
240-22783-2 MSD	MRC-MW--71B-040313 MSD	04/09/2013 20:05	3.33	UXC0579.D	DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: BFB106A.D BFB Injection Date: 04/09/2013

Instrument ID: A3UX15 BFB Injection Time: 09:53

Analysis Batch No.: 81120

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.0	
75	30.0 - 60.0 % of mass 95	48.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.8	
173	Less than 2.0 % of mass 174	0.5	(0.5)1
174	50.0 - 120.00 % of mass 95	92.5	
175	5.0 - 9.0 % of mass 174	6.4	(6.9)1
176	95.0 - 101.0 % of mass 174	90.5	(97.8)1
177	5.0 - 9.0 % of mass 176	5.1	(5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81120/2	UXC0553.D	04/09/2013	10:18
	CCV 240-81120/3	UXC0554.D	04/09/2013	10:40
	LCS 240-81120/4	UXC0555.D	04/09/2013	11:03
	MB 240-81120/5	UXC0557.D	04/09/2013	11:48
TB-040313	240-22783-1	UXC0576.D	04/09/2013	18:58
MRC-MW--71B-040313	240-22783-2	UXC0577.D	04/09/2013	19:20
MRC-MW--71B-040313 MS	240-22783-2 MS	UXC0578.D	04/09/2013	19:42
MRC-MW--71B-040313 MSD	240-22783-2 MSD	UXC0579.D	04/09/2013	20:05

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.4443		1.00	0.0100	13.7	50.0
Chloromethane	Ave	0.5133	0.5569	0.1000	1.00	0.0100	8.5	50.0
Vinyl chloride	Ave	0.5765	0.6443		1.00	0.0100	11.8	20.0
Bromomethane	Ave	0.3951	0.4492		1.00	0.0100	13.7	50.0
Chloroethane	Ave	0.3438	0.4113		1.00	0.0100	19.6	50.0
Trichlorofluoromethane	Ave	0.5693	0.5459		1.00	0.0100	-4.1	50.0
Acrolein	Qua		0.0522		20.0	0.100	40.5	50.0
1,1-Dichloroethene	Ave	0.3445	0.4124		1.00	0.0100	19.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3122		1.00	0.0100	18.6	50.0
Acetone	Qua		0.0794		10.0	0.0200	7.1	50.0
Iodomethane	Ave	0.4958	0.6073		1.00	0.0100	22.5	50.0
Carbon disulfide	Ave	0.7463	0.9707		1.00	0.0100	30.1	50.0
Acetonitrile	Ave	0.0282	0.0328		20.0	0.100	16.5	50.0
Methyl acetate	Ave	0.1586	0.1592		10.0	0.0200	0.3	50.0
Methylene Chloride	Lin1		0.4876		1.00	0.0100	29.1	50.0
tert-Butyl alcohol	Ave	0.0097	0.0094		50.0	0.200	-2.4	50.0
Acrylonitrile	Ave	0.0871	0.0984		20.0	0.0200	12.9	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.4026		1.00	0.0100	12.8	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6773		1.00	0.0100	7.3	50.0
Hexane	Ave	0.0668	0.0796		1.00	0.0100	19.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.6212	0.1000	1.00	0.0100	8.1	50.0
Vinyl acetate	Ave	0.0383	0.0338		2.00	0.0100	-11.8	50.0
2,2-Dichloropropane	Ave	0.2770	0.2806		1.00	0.0100	1.3	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4009		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0913		10.0	0.0200	0.3	50.0
Bromochloromethane	Ave	0.1662	0.1784		1.00	0.0100	7.3	50.0
Tetrahydrofuran	Lin1		0.0526		5.00	0.0100	5.3	50.0
Chloroform	Ave	0.5671	0.5980		1.00	0.0100	5.4	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4423		1.00	0.0100	7.4	50.0
Cyclohexane	Ave	0.5423	0.6641		1.00	0.0100	22.5	50.0
1,1-Dichloropropene	Ave	0.4381	0.4574		1.00	0.0100	4.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3342		1.00	0.0100	3.0	50.0
Benzene	Ave	1.387	1.429		1.00	0.0100	3.0	50.0
1,2-Dichloroethane	Ave	0.4040	0.3982		1.00	0.0100	-1.4	50.0
Trichloroethene	Ave	0.3397	0.3372		1.00	0.0100	-0.7	50.0
Methylcyclohexane	Ave	0.5006	0.5884		1.00	0.0100	17.5	50.0
1,2-Dichloropropane	Ave	0.3010	0.3181		1.00	0.0100	5.7	20.0
Dibromomethane	Ave	0.1618	0.1588		1.00	0.0100	-1.8	50.0
1,4-Dioxane	Lin1		0.0020		50.0	0.500	-22.8	50.0
Bromodichloromethane	Ave	0.3013	0.2944		1.00	0.0100	-2.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1011		10.0	0.0200	-15.3	50.0
cis-1,3-Dichloropropene	Lin1		0.2773		1.00	0.0100	-22.3	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1629		10.0	0.0200	6.4	50.0
Toluene	Ave	2.028	2.061		1.00	0.0100	1.6	20.0
trans-1,3-Dichloropropene	Lin1		0.2921		1.00	0.0100	-27.9	50.0
Ethyl methacrylate	Lin1		0.3349		1.00	0.0100	-11.5	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3077		1.00	0.0100	-4.8	50.0
Tetrachloroethene	Ave	0.3905	0.3768		1.00	0.0100	-3.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5522		1.00	0.0100	-6.4	50.0
2-Hexanone	Ave	0.1436	0.1498		10.0	0.0200	4.4	50.0
Dibromochloromethane	Lin1		0.2358		1.00	0.0100	-23.2	50.0
1,2-Dibromoethane	Ave	0.3048	0.2968		1.00	0.0100	-2.6	50.0
Chlorobenzene	Ave	1.276	1.254	0.3000	1.00	0.0100	-1.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3685		1.00	0.0100	4.3	50.0
Ethylbenzene	Ave	0.6700	0.7099		1.00	0.0100	6.0	20.0
m-Xylene & p-Xylene	Ave	1.626	1.790		2.00	0.0200	10.1	50.0
o-Xylene	Ave	0.8173	0.9196		1.00	0.0100	12.5	50.0
Styrene	Lin1		1.430		1.00	0.0100	-1.7	50.0
Bromoform	Lin1		0.1183	0.1000	1.00	0.0100	-23.3	50.0
Isopropylbenzene	Ave	1.984	2.250		1.00	0.0100	13.4	50.0
Bromobenzene	Ave	0.9263	0.7965		1.00	0.0100	-14.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6051	0.3000	1.00	0.0100	-12.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1884		1.00	0.0100	-14.6	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0865		1.00	0.0100	12.8	50.0
n-Propylbenzene	Ave	0.9249	0.9024		1.00	0.0100	-2.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8507		1.00	0.0100	-3.8	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.845		1.00	0.0100	4.2	50.0
4-Chlorotoluene	Ave	2.918	2.787		1.00	0.0100	-4.5	50.0
tert-Butylbenzene	Ave	2.268	2.298		1.00	0.0100	1.3	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.909		1.00	0.0100	2.0	50.0
sec-Butylbenzene	Ave	3.298	3.485		1.00	0.0100	5.7	50.0
1,3-Dichlorobenzene	Ave	1.741	1.662		1.00	0.0100	-4.5	50.0
p-Isopropyltoluene	Ave	2.821	2.913		1.00	0.0100	3.3	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.595		1.00	0.0100	-4.7	50.0
n-Butylbenzene	Ave	2.489	2.696		1.00	0.0100	8.3	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0538		2.00	0.0100	-21.4	50.0
1,3,5-Trichlorobenzene	Ave	1.071	1.050		1.00	0.0100	-1.9	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7006		1.00	0.0100	-7.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4850		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.168		1.00	0.0100	-23.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVIS 240-81120/2 Calibration Date: 04/09/2013 10:18

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0553.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.5537		1.00	0.0100	-15.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2928		0.00833	0.00890	-6.4	50.0
Toluene-d8 (Surr)	Ave	1.667	1.609		0.00859	0.00890	-3.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5606		0.00962	0.00890	8.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-81120/3 Calibration Date: 04/09/2013 10:40

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0554.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.9457		2.00	0.0100	10.2	50.0
Ethyl ether	Ave	0.3178	0.3112		2.00	0.0100	-2.1	50.0
3-Chloro-1-propene	Ave	0.1476	0.1654		2.00	0.0100	12.1	50.0
Diisopropyl ether	Ave	0.2893	0.3105		10.0	0.0500	7.3	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.5309		2.00	0.0100	4.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6680		5.00	0.0100	4.2	50.0
Ethyl acetate	Ave	0.1470	0.1396		4.00	0.0200	-5.0	50.0
Propionitrile	Ave	0.0282	0.0312		4.00	0.0200	10.7	50.0
Methacrylonitrile	Ave	0.1169	0.1155		2.00	0.0100	-1.2	50.0
Isobutyl alcohol	Ave	0.0041	0.0048		50.0	0.200	16.1	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.4930		5.00	0.0100	1.6	50.0
n-Heptane	Ave	0.0670	0.0680		1.00	0.0100	1.5	50.0
n-Butanol	Ave	0.0027	0.0028		50.0	0.200	4.3	50.0
Methyl methacrylate	Ave	0.1349	0.1214		2.00	0.0100	-10.0	50.0
2-Nitropropane	Ave	0.0194	0.0167		2.00	0.0200	-13.9	50.0
Cyclohexanone	Ave	0.0865	0.0278		20.0	0.100	-67.9*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.350		0.0110	0.0100	10.0	50.0
2-Methylnaphthalene	Qua		0.2012		5.00	0.0200	-49.3	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: UXC0557.D Lab Sample ID: MB 240-81120/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/09/2013 11:48

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81120/4	UXC0555.D	04/09/2013 11:03
TB-040313	240-22783-1	UXC0576.D	04/09/2013 18:58
MRC-MW--71B-040313	240-22783-2	UXC0577.D	04/09/2013 19:20
MRC-MW--71B-040313 MS	240-22783-2 MS	UXC0578.D	04/09/2013 19:42
MRC-MW--71B-040313 MSD	240-22783-2 MSD	UXC0579.D	04/09/2013 20:05

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81120/5

Matrix: Water | Lab File ID: UXC0557.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81120/5

Matrix: Water | Lab File ID: UXC0557.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81120 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81120/5

Matrix: Water Lab File ID: UXC0557.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/09/2013 11:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81120 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0555.D

Lab ID: LCS 240-81120/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.4	92	43-136	
Benzene	10.0	10.2	102	83-112	
Bromobenzene	10.0	9.26	93	76-115	
Bromochloromethane	10.0	9.68	97	77-120	
Bromodichloromethane	10.0	9.90	99	72-121	
Bromoform	10.0	7.03	70	40-131	
Bromomethane	10.0	7.22	72	11-185	
2-Butanone	20.0	19.2	96	60-126	
Carbon disulfide	10.0	11.4	114	62-142	
Carbon tetrachloride	10.0	9.86	99	66-128	
Chlorobenzene	10.0	9.50	95	85-110	
Chloroethane	10.0	8.48	85	25-153	
2-Chloroethyl vinyl ether	10.0	8.54 J	85	52-131	
Chloroform	10.0	10.4	104	79-117	
Chloromethane	10.0	8.11	81	44-126	
2-Chlorotoluene	10.0	9.79	98	76-116	
4-Chlorotoluene	10.0	9.98	100	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.00	80	61-115	
Dibromochloromethane	10.0	7.54	75	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.38	84	42-136	
1,2-Dibromoethane	10.0	9.42	94	79-113	
Dibromomethane	10.0	10.1	101	81-120	
1,2-Dichlorobenzene	10.0	9.75	97	81-110	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,4-Dichlorobenzene	10.0	9.55	95	82-110	
Dichlorodifluoromethane	10.0	6.54	65	19-129	
1,1-Dichloroethane	10.0	10.5	105	82-115	
1,2-Dichloroethane	10.0	9.94	99	71-127	
1,1-Dichloroethene	10.0	10.9	109	78-131	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichloropropane	10.0	9.49	95	79-116	
2,2-Dichloropropane	10.0	9.31	93	50-129	
1,1-Dichloropropene	10.0	10.3	103	83-114	
Diisopropyl ether	10.0	9.49	95	77-118	
Ethylbenzene	10.0	10.1	101	83-112	
Hexachlorobutadiene	10.0	8.28	83	36-134	
2-Hexanone	20.0	20.2	101	55-133	
Isopropylbenzene	10.0	10.3	103	75-114	
Methylene Chloride	10.0	10.8	108	66-131	
4-Methyl-2-pentanone	20.0	20.2	101	63-128	
Methyl tert-butyl ether	10.0	9.75	98	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0555.D

Lab ID: LCS 240-81120/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.5	102	83-113	
Naphthalene	10.0	7.75	77	32-141	
n-Butylbenzene	10.0	11.1	111	66-125	
n-Propylbenzene	10.0	10.6	106	74-121	
o-Xylene	10.0	10.1	101	83-113	
p-Isopropyltoluene	10.0	11.0	110	74-120	
sec-Butylbenzene	10.0	10.6	106	70-117	
Styrene	10.0	9.36	94	79-114	
tert-Butyl alcohol	200	196	98	70-130	
tert-Butylbenzene	10.0	10.4	104	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.56	96	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.20	92	68-118	
Tetrachloroethene	10.0	9.45	95	79-114	
Toluene	10.0	9.76	98	84-111	
trans-1,2-Dichloroethene	10.0	10.1	101	83-117	
trans-1,3-Dichloropropene	10.0	7.74	77	58-117	
1,2,3-Trichlorobenzene	10.0	8.55	85	54-126	
1,2,4-Trichlorobenzene	10.0	8.74	87	48-135	
1,1,1-Trichloroethane	10.0	9.87	99	74-118	
Trichloroethene	10.0	9.94	99	76-117	
Trichlorofluoromethane	10.0	7.81	78	49-157	
1,2,3-Trichloropropane	10.0	8.94	89	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.8	118	74-151	
1,2,3-Trimethylbenzene	10.0	10.3	103	70-130	
1,2,4-Trimethylbenzene	10.0	10.7	107	76-120	
Vinyl acetate	10.0	7.42	74	46-161	
Vinyl chloride	10.0	8.50	85	53-127	
Xylenes, Total	30.0	30.6	102	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0578.D

Lab ID: 240-22783-2 MS Client ID: MRC-MW--71B-040313 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	66.6	17 U	62.3	94	33-145	
Benzene	33.3	3.3 U	33.6	101	72-121	
Bromobenzene	33.3	3.3 U	27.8	83	71-116	
Bromochloromethane	33.3	3.3 U	33.4	100	73-121	
Bromodichloromethane	33.3	3.3 U	31.4	94	67-120	
Bromoform	33.3	3.3 U	24.6	74	32-128	
Bromomethane	33.3	3.3 U	27.2	82	10-186	
2-Butanone	66.6	17 U	66.9	100	54-129	
Carbon disulfide	33.3	3.3 U	35.8	108	57-147	
Carbon tetrachloride	33.3	3.3 U	30.3	91	59-129	
Chlorobenzene	33.3	3.3 U	31.6	95	80-110	
Chloroethane	33.3	3.3 U	31.6	95	21-165	
2-Chloroethyl vinyl ether	33.3	33 U	33 U	0	10-150	F
Chloroform	33.3	3.3 U	33.3	100	76-118	
Chloromethane	33.3	3.3 U	29.3	88	33-132	
2-Chlorotoluene	33.3	3.3 U	29.0	87	69-117	
4-Chlorotoluene	33.3	3.3 U	29.3	88	71-116	
cis-1,2-Dichloroethene	33.3	10	43.4	99	70-120	
cis-1,3-Dichloropropene	33.3	3.3 U	23.0	69	51-110	
Dibromochloromethane	33.3	3.3 U	25.6	77	56-118	
1,2-Dibromo-3-Chloropropane	33.3	17 U	27.8	83	32-139	
1,2-Dibromoethane	33.3	3.3 U	33.4	100	74-113	
Dibromomethane	33.3	3.3 U	34.8	105	77-121	
1,2-Dichlorobenzene	33.3	3.3 U	30.0	90	75-111	
1,3-Dichlorobenzene	33.3	3.3 U	29.6	89	73-110	
1,4-Dichlorobenzene	33.3	3.3 U	28.8	86	75-110	
Dichlorodifluoromethane	33.3	3.3 U	20.1	60	17-128	
1,1-Dichloroethane	33.3	4.9	39.9	105	79-116	
1,2-Dichloroethane	33.3	0.77 J	33.1	97	68-129	
1,1-Dichloroethene	33.3	52	81.8	91	74-135	
1,2-Dichloropropane	33.3	3.3 U	33.1	99	78-115	
1,3-Dichloropropane	33.3	3.3 U	33.8	101	74-118	
2,2-Dichloropropane	33.3	3.3 U	27.5	82	38-127	
1,1-Dichloropropene	33.3	3.3 U	32.5	98	80-114	
Diisopropyl ether	33.3	17 U	30.9	93	73-118	
Ethylbenzene	33.3	3.3 U	33.0	99	75-116	
Hexachlorobutadiene	33.3	3.3 U	23.5	70	27-132	
2-Hexanone	66.6	17 U	72.7	109	47-139	
Isopropylbenzene	33.3	3.3 U	33.6	101	68-116	
Methylene Chloride	33.3	1.4 J	37.4	108	63-128	
4-Methyl-2-pentanone	66.6	17 U	68.5	103	56-131	
Methyl tert-butyl ether	33.3	3.3 U	34.1	102	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0578.D

Lab ID: 240-22783-2 MS Client ID: MRC-MW--71B-040313 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	66.6	6.7 U	68.0	102	75-117	
Naphthalene	33.3	3.3 U	24.6	74	15-158	
n-Butylbenzene	33.3	3.3 U	31.9	96	56-127	
n-Propylbenzene	33.3	3.3 U	29.8	90	64-124	
o-Xylene	33.3	3.3 U	34.8	105	76-116	
p-Isopropyltoluene	33.3	3.3 U	31.8	95	64-122	
sec-Butylbenzene	33.3	3.3 U	29.7	89	60-119	
Styrene	33.3	3.3 U	31.2	94	71-117	
tert-Butyl alcohol	666	67 U	700	105	70-130	
tert-Butylbenzene	33.3	3.3 U	30.0	90	61-119	
1,1,1,2-Tetrachloroethane	33.3	3.3 U	32.1	96	64-118	
1,1,2,2-Tetrachloroethane	33.3	3.3 U	29.4	88	63-122	
Tetrachloroethene	33.3	3.3 U	30.7	92	70-117	
Toluene	33.3	3.3 U	32.4	97	78-114	
trans-1,2-Dichloroethene	33.3	3.3 U	33.6	101	80-119	
trans-1,3-Dichloropropene	33.3	3.3 U	25.8	77	46-116	
1,2,3-Trichlorobenzene	33.3	3.3 U	27.8	84	45-129	
1,2,4-Trichlorobenzene	33.3	3.3 U	26.0	78	38-138	
1,1,1-Trichloroethane	33.3	3.3 U	32.6	98	68-121	
Trichloroethene	33.3	86	114	83	66-120	
Trichlorofluoromethane	33.3	3.3 U	26.7	80	46-157	
1,2,3-Trichloropropane	33.3	3.3 U	29.6	89	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	33.3	3.3 U	36.6	110	70-152	
1,2,3-Trimethylbenzene	33.3	17 U	31.4	94	70-130	
1,2,4-Trimethylbenzene	33.3	3.3 U	30.8	93	67-124	
Vinyl acetate	33.3	6.7 U	25.1	75	43-157	
Vinyl chloride	33.3	3.3 U	30.3	91	49-130	
Xylenes, Total	99.9	6.7 U	103	103	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0579.D

Lab ID: 240-22783-2 MSD Client ID: MRC-MW--71B-040313 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	66.6	63.9	96	3	30	33-145	
Benzene	33.3	33.7	101	0	30	72-121	
Bromobenzene	33.3	29.4	88	6	30	71-116	
Bromochloromethane	33.3	31.9	96	5	30	73-121	
Bromodichloromethane	33.3	32.9	99	5	30	67-120	
Bromoform	33.3	25.2	76	2	30	32-128	
Bromomethane	33.3	26.4	79	3	30	10-186	
2-Butanone	66.6	65.1	98	3	30	54-129	
Carbon disulfide	33.3	37.4	112	4	30	57-147	
Carbon tetrachloride	33.3	31.5	95	4	30	59-129	
Chlorobenzene	33.3	31.7	95	0	30	80-110	
Chloroethane	33.3	31.0	93	2	30	21-165	
2-Chloroethyl vinyl ether	33.3	33 U	0	NC	30	10-150	F
Chloroform	33.3	34.9	105	5	30	76-118	
Chloromethane	33.3	28.6	86	3	30	33-132	
2-Chlorotoluene	33.3	30.0	90	3	30	69-117	
4-Chlorotoluene	33.3	30.6	92	5	30	71-116	
cis-1,2-Dichloroethene	33.3	43.1	98	1	30	70-120	
cis-1,3-Dichloropropene	33.3	25.9	78	12	30	51-110	
Dibromochloromethane	33.3	26.2	79	2	30	56-118	
1,2-Dibromo-3-Chloropropane	33.3	28.9	87	4	30	32-139	
1,2-Dibromoethane	33.3	31.9	96	5	30	74-113	
Dibromomethane	33.3	34.5	104	1	30	77-121	
1,2-Dichlorobenzene	33.3	31.9	96	6	30	75-111	
1,3-Dichlorobenzene	33.3	31.0	93	5	30	73-110	
1,4-Dichlorobenzene	33.3	30.5	92	6	30	75-110	
Dichlorodifluoromethane	33.3	21.2	64	5	30	17-128	
1,1-Dichloroethane	33.3	39.5	104	1	30	79-116	
1,2-Dichloroethane	33.3	34.3	101	3	30	68-129	
1,1-Dichloroethene	33.3	80.6	87	1	30	74-135	
1,2-Dichloropropane	33.3	34.3	103	4	30	78-115	
1,3-Dichloropropane	33.3	32.5	97	4	30	74-118	
2,2-Dichloropropane	33.3	28.0	84	2	30	38-127	
1,1-Dichloropropene	33.3	33.2	100	2	30	80-114	
Diisopropyl ether	33.3	32.1	96	4	30	73-118	
Ethylbenzene	33.3	31.9	96	3	30	75-116	
Hexachlorobutadiene	33.3	24.1	72	3	30	27-132	
2-Hexanone	66.6	75.5	113	4	30	47-139	
Isopropylbenzene	33.3	33.4	100	0	30	68-116	
Methylene Chloride	33.3	38.4	111	3	30	63-128	
4-Methyl-2-pentanone	66.6	72.3	109	5	30	56-131	
Methyl tert-butyl ether	33.3	33.4	100	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0579.D

Lab ID: 240-22783-2 MSD Client ID: MRC-MW--71B-040313 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	66.6	66.4	100	2	30	75-117	
Naphthalene	33.3	26.7	80	8	30	15-158	
n-Butylbenzene	33.3	32.1	97	1	30	56-127	
n-Propylbenzene	33.3	30.6	92	3	30	64-124	
o-Xylene	33.3	33.1	99	5	30	76-116	
p-Isopropyltoluene	33.3	32.3	97	2	30	64-122	
sec-Butylbenzene	33.3	31.3	94	5	30	60-119	
Styrene	33.3	31.0	93	1	30	71-117	
tert-Butyl alcohol	666	719	108	3	30	70-130	
tert-Butylbenzene	33.3	31.7	95	5	30	61-119	
1,1,1,2-Tetrachloroethane	33.3	32.1	96	0	30	64-118	
1,1,2,2-Tetrachloroethane	33.3	32.1	96	9	30	63-122	
Tetrachloroethene	33.3	31.2	94	2	30	70-117	
Toluene	33.3	32.6	98	1	30	78-114	
trans-1,2-Dichloroethene	33.3	32.9	99	2	30	80-119	
trans-1,3-Dichloropropene	33.3	26.7	80	4	30	46-116	
1,2,3-Trichlorobenzene	33.3	29.5	89	6	30	45-129	
1,2,4-Trichlorobenzene	33.3	27.4	82	5	30	38-138	
1,1,1-Trichloroethane	33.3	32.7	98	0	30	68-121	
Trichloroethene	33.3	114	82	0	30	66-120	
Trichlorofluoromethane	33.3	29.0	87	8	30	46-157	
1,2,3-Trichloropropane	33.3	30.8	92	4	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	33.3	35.9	108	2	30	70-152	
1,2,3-Trimethylbenzene	33.3	32.1	97	2	30	70-130	
1,2,4-Trimethylbenzene	33.3	32.0	96	4	30	67-124	
Vinyl acetate	33.3	26.8	80	6	30	43-157	
Vinyl chloride	33.3	29.3	88	3	30	49-130	
Xylenes, Total	99.9	99.5	100	3	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A3UX16 Start Date: 11/27/2012 15:03

Analysis Batch Number: 66473 End Date: 11/27/2012 20:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-66473/1		11/27/2012 15:03	1	BFB3402.D	DB-624 0.18(mm)
STD8260 240-66473/2 IC		11/27/2012 15:43	1		DB-624 0.18(mm)
STD8260 240-66473/3 IC		11/27/2012 16:05	1		DB-624 0.18(mm)
STD8260 240-66473/4 ICIS		11/27/2012 16:28	1		DB-624 0.18(mm)
STD8260 240-66473/5 IC		11/27/2012 16:51	1		DB-624 0.18(mm)
STD8260 240-66473/6 IC		11/27/2012 17:14	1		DB-624 0.18(mm)
STD8260 240-66473/7 IC		11/27/2012 17:36	1		DB-624 0.18(mm)
STD1 240-66473/8 IC		11/27/2012 17:59	1	UXM9089.D	DB-624 0.18(mm)
STD2 240-66473/9 IC		11/27/2012 18:22	1	UXM9090.D	DB-624 0.18(mm)
STD3 240-66473/10 IC		11/27/2012 18:44	1	UXM9091.D	DB-624 0.18(mm)
STD4 240-66473/11 IC		11/27/2012 19:07	1	UXM9092.D	DB-624 0.18(mm)
STD5 240-66473/12 IC		11/27/2012 19:30	1	UXM9093.D	DB-624 0.18(mm)
STD6 240-66473/13 IC		11/27/2012 19:53	1	UXM9094.D	DB-624 0.18(mm)
ICV 240-66473/14		11/27/2012 20:16	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: BFB3402.D BFB Injection Date: 11/27/2012

Instrument ID: A3UX16 BFB Injection Time: 15:03

Analysis Batch No.: 66473

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.5	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.3)1
176	95.0 - 101.0 % of mass 174	71.2	(95.1)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-66473/8	UXM9089.D	11/27/2012	17:59
	STD2 240-66473/9	UXM9090.D	11/27/2012	18:22
	STD3 240-66473/10	UXM9091.D	11/27/2012	18:44
	STD4 240-66473/11	UXM9092.D	11/27/2012	19:07
	STD5 240-66473/12	UXM9093.D	11/27/2012	19:30
	STD6 240-66473/13	UXM9094.D	11/27/2012	19:53

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6395 0.5790	0.5949	0.6191	0.5701	0.5598	Ave		0.5937				5.1		15.0			
Ethyl ether	0.2957 0.2913	0.2805	0.3162	0.2908	0.2785	Ave		0.2922				4.6		15.0			
3-Chloro-1-propene	0.1657 0.1816	0.1589	0.1747	0.1684	0.1734	Ave		0.1704				4.6		15.0			
Diisopropyl ether	0.2885 0.3072	0.2714	0.3042	0.2883	0.2921	Ave		0.2920				4.4		15.0			
2-Chloro-1,3-butadiene	0.5541 0.6319	0.5394	0.6027	0.5733	0.5814	Ave		0.5805				5.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.9712 1.0865	0.9515	1.0602	1.0211	1.0411	Ave		1.0219				5.1		15.0			
Propionitrile	0.0336 0.0410	0.0390	0.0380	0.0379	0.0392	Ave		0.0381				6.4		15.0			
Ethyl acetate	0.2415 0.2708	0.2384	0.2467	0.2536	0.2545	Ave		0.2509				4.6		15.0			
Methacrylonitrile	0.2017 0.1992	0.1750	0.1941	0.1858	0.1896	Ave		0.1909				5.1		15.0			
Isobutyl alcohol	0.0071 0.0081	0.0070	0.0072	0.0075	0.0077	Ave		0.0074				5.5		15.0			
Tert-amyl-methyl ether (TAME)	0.7918 0.9098	0.8105	0.8835	0.8488	0.8716	Ave		0.8526				5.3		15.0			
n-Heptane	0.0550 0.0612	0.0566	0.0534	0.0500	0.0453	Ave		0.0536				10.0		15.0			
n-Butanol	0.0039 0.0055	0.0047	0.0054	0.0053	0.0055	Ave		0.0051				13.0		15.0			
Methyl methacrylate	0.2010 0.2422	0.1999	0.2231	0.2243	0.2270	Ave		0.2196				7.4		15.0			
2-Nitropropane	0.0355 +++++	0.0470	0.0403	0.0428	0.0485	Ave		0.0428				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0937 0.0872	0.0965	0.1030	0.0923	0.0852	Ave		0.0930				6.9		15.0			
1,2,3-Trimethylbenzene	2.4010 2.9673	2.3401	2.6960	2.6868	2.7750	Ave		2.6444				8.9		15.0			
2-Methylnaphthalene	0.8663 +++++	1.0537	1.0510	0.9969	0.7520	Ave		0.9440				14.0		15.0			
n-Butyl acetate	0.3213 0.3680	0.3124	0.3343	0.3499	0.3540	Ave		0.3400				6.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	96265 3885866	188892	480322	919071	1818946	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44512 1954925	89076	245325	468826	904779	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	24941 1218624	50452	135545	271449	563354	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	217143 10307503	430855	1180172	2324083	4746328	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	83400 4240619	171284	467557	924312	1889195	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	146185 7291467	302133	822466	1646221	3382782	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Ave	10130 550208	24762	58958	122192	254698	2.00 80.0	4.00	10.0	20.0	40.0
Ethyl acetate	FB	Ave	72716 3634835	151400	382712	817781	1654005	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	30360 1337016	55567	150568	299566	615902	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	21403 1090498	44751	112361	241228	497993	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	119182 6105534	257361	685393	1368377	2832050	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	8276 410957	17974	41434	80621	147170	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	11694 738827	29851	84515	171975	354555	20.0 800	40.0	100	200	400
Methyl methacrylate	FB	Ave	30255 1625339	63469	173111	361635	737574	1.00 40.0	2.00	5.00	10.0	20.0
2-Nitropropane	FB	Ave	10682 +++++	29829	62520	137963	314932	2.00 +++++	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Ave	51939 1993752	112524	285430	531833	989965	10.0 400	20.0	50.0	100	200

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCB	Ave	133063 6780956	272872	747147	1547875	3225366	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCB	Ave	96020 +++++	245742	582514	1148653	1748070	2.00 +++++	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	96726 4939476	198374	518753	1128341	2300720	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:
Ave = Average ISTD

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A3UX16 Start Date: 02/07/2013 12:56

Analysis Batch Number: 74618 End Date: 02/08/2013 00:42

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-74618/1		02/07/2013 12:56	1	BFB297.D	DB-624 0.18(mm)
STD8260 240-74618/2 IC		02/07/2013 13:27	1	UXM6218.D	DB-624 0.18(mm)
STD8260 240-74618/3 IC		02/07/2013 13:50	1	UXM6219.D	DB-624 0.18(mm)
STD8260 240-74618/4 ICIS		02/07/2013 14:12	1	UXM6220.D	DB-624 0.18(mm)
STD8260 240-74618/5 IC		02/07/2013 14:35	1	UXM6221.D	DB-624 0.18(mm)
STD8260 240-74618/6 IC		02/07/2013 14:58	1	UXM6222.D	DB-624 0.18(mm)
STD8260 240-74618/7 IC		02/07/2013 15:20	1	UXM6223.D	DB-624 0.18(mm)
ICV 240-74618/8		02/07/2013 15:43	1	UXM6224.D	DB-624 0.18(mm)
ZZZZZ		02/07/2013 16:06	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 16:29	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 18:00	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 18:22	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 18:45	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 19:07	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 19:29	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 19:52	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 20:14	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 20:36	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 20:59	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 21:21	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 21:44	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 22:06	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 22:28	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 22:50	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 23:13	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 23:35	1		DB-624 0.18(mm)
ZZZZZ		02/07/2013 23:58	1		DB-624 0.18(mm)
ZZZZZ		02/08/2013 00:20	1		DB-624 0.18(mm)
ZZZZZ		02/08/2013 00:42	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: BFB297.D BFB Injection Date: 02/07/2013

Instrument ID: A3UX16 BFB Injection Time: 12:56

Analysis Batch No.: 74618

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.9	
75	30.0 - 60.0 % of mass 95	56.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	51.6	
175	5.0 - 9.0 % of mass 174	3.4	(6.5)1
176	95.0 - 101.0 % of mass 174	50.1	(97.1)1
177	5.0 - 9.0 % of mass 176	3.4	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-74618/2	UXM6218.D	02/07/2013	13:27
	STD8260 240-74618/3	UXM6219.D	02/07/2013	13:50
	STD8260 240-74618/4	UXM6220.D	02/07/2013	14:12
	STD8260 240-74618/5	UXM6221.D	02/07/2013	14:35
	STD8260 240-74618/6	UXM6222.D	02/07/2013	14:58
	STD8260 240-74618/7	UXM6223.D	02/07/2013	15:20
	ICV 240-74618/8	UXM6224.D	02/07/2013	15:43

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74618/7	UXM6223.D
Level 2	STD8260 240-74618/6	UXM6222.D
Level 3	STD8260 240-74618/5	UXM6221.D
Level 4	STD8260 240-74618/4	UXM6220.D
Level 5	STD8260 240-74618/3	UXM6219.D
Level 6	STD8260 240-74618/2	UXM6218.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1655 0.2139	0.1950	0.2117	0.2250	0.1770	Ave		0.1980				12.0		15.0			
Chloromethane	0.5058 0.4534	0.4913	0.4685	0.4467	0.4652	Ave		0.4718			0.1000	4.8		15.0			
Vinyl chloride	0.4479 0.4349	0.4543	0.4578	0.4328	0.4507	Ave		0.4464				2.3		15.0			
Bromomethane	0.1647 0.1134	0.1618	0.1243	0.1362	0.1072	Lin1	0.0733	0.1117							0.9930		0.9900
Chloroethane	0.3008 0.2699	0.2633	0.2651	0.2622	0.2584	Ave		0.2699				5.8		15.0			
Trichlorofluoromethane	0.1945 0.1767	0.1777	0.1872	0.1834	0.1598	Ave		0.1799				6.6		15.0			
Acrolein	0.0621 0.0714	0.0629	0.0667	0.0657	0.0611	Ave		0.0650				5.9		15.0			
1,1-Dichloroethene	0.2925 0.3178	0.2976	0.2885	0.2944	0.2961	Ave		0.2978				3.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1277 0.1255	0.1102	0.1219	0.1299	0.1021	Ave		0.1196				9.2		15.0			
Acetone	0.1631 0.1304	0.1249	0.1382	0.1245	0.1110	Ave		0.1320				13.0		15.0			
Iodomethane	0.3203 0.3505	0.3484	0.3203	0.3182	0.3277	Ave		0.3309				4.5		15.0			
Carbon disulfide	0.9006 1.1662	0.9102	0.9141	0.9835	1.0269	Ave		0.9836				10.0		15.0			
Acetonitrile	0.0501 0.0501	0.0368	0.0476	0.0422	0.0348	Ave		0.0436				15.0		15.0			
Methyl acetate	0.3200 0.3183	0.3023	0.3159	0.3003	0.2851	Ave		0.3070				4.4		15.0			
Methylene Chloride	0.4848 0.3837	0.4381	0.3679	0.3537	0.3640	Ave		0.3987				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0199 0.0200	0.0154	0.0200	0.0182	0.0142	Ave		0.0180				14.0		15.0			
Acrylonitrile	0.1454 0.1558	0.1411	0.1518	0.1445	0.1383	Ave		0.1462				4.5		15.0			
Methyl tert-butyl ether	0.9103 1.0586	0.9378	0.9098	0.9208	0.9452	Ave		0.9471				6.0		15.0			
trans-1,2-Dichloroethene	0.3352 0.3614	0.3383	0.3201	0.3225	0.3390	Ave		0.3361				4.4		15.0			
Hexane	0.0729 0.0745	0.0604	0.0768	0.0775	0.0594	Ave		0.0703				12.0		15.0			
1,1-Dichloroethane	0.7047 0.7867	0.7510	0.6985	0.6925	0.7265	Ave		0.7266			0.1000	5.0		15.0			
Vinyl acetate	0.0486 0.0680	0.0460	0.0541	0.0579	0.0610	Ave		0.0560				15.0		15.0			
2-Butanone	0.1932 0.1741	0.1465	0.1768	0.1602	0.1554	Ave		0.1677				10.0		15.0			
cis-1,2-Dichloroethene	0.3362 0.3742	0.3651	0.3392	0.3299	0.3496	Ave		0.3490				5.0		15.0			
2,2-Dichloropropane	0.2813 0.3509	0.2981	0.2821	0.3032	0.3241	Ave		0.3066				8.7		15.0			
Bromochloromethane	0.1382 0.1411	0.1314	0.1248	0.1258	0.1302	Ave		0.1319				5.0		15.0			
Tetrahydrofuran	0.2003 0.1123	0.1251	0.1133	0.1091	0.0977	Lin1	0.0706	0.1042							0.9920		0.9900
Chloroform	0.5694 0.6344	0.6062	0.5689	0.5595	0.5889	Ave		0.5879				4.8		15.0			
1,1,1-Trichloroethane	0.3357 0.4198	0.3545	0.3585	0.3720	0.3793	Ave		0.3700				7.8		15.0			
Cyclohexane	0.6018 0.7292	0.5994	0.6741	0.7267	0.6358	Ave		0.6611				8.8		15.0			
1,1-Dichloropropene	0.4526 0.5465	0.4899	0.4801	0.4880	0.4937	Ave		0.4918				6.2		15.0			
Carbon tetrachloride	0.2047 0.2871	0.2145	0.2204	0.2455	0.2522	Ave		0.2374				13.0		15.0			
1,2-Dichloroethane	0.5136 0.5650	0.5326	0.4994	0.4893	0.5154	Ave		0.5192				5.2		15.0			
Benzene	1.5256 1.6847	1.5537	1.4382	1.4263	1.5081	Ave		1.5228				6.2		15.0			
Trichloroethene	0.2530 0.2800	0.2635	0.2536	0.2460	0.2572	Ave		0.2589				4.6		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4063 0.5136	0.3939	0.4873	0.5164	0.4219	Ave		0.4566				12.0		15.0			
1,2-Dichloropropane	0.3429 0.4213	0.3676	0.3520	0.3598	0.3788	Ave		0.3704				7.5		15.0			
Dibromomethane	0.1600 0.1800	0.1687	0.1666	0.1599	0.1642	Ave		0.1666				4.5		15.0			
1,4-Dioxane	0.0022 0.0021	0.0014	0.0024	0.0019	0.0018	Qua	0.0828	0.0015	0						0.9960		0.9900
Bromodichloromethane	0.2757 0.4230	0.3164	0.3178	0.3358	0.3740	Ave		0.3405				15.0		15.0			
2-Chloroethyl vinyl ether	0.1018 0.1952	0.1176	0.1452	0.1527	0.1656	Lin1	-0.250	0.1854							0.9920		0.9900
cis-1,3-Dichloropropene	0.3128 0.5541	0.3599	0.3850	0.4141	0.4734	Qua	-0.115	0.3937	0.0041						1.0000		0.9900
4-Methyl-2-pentanone	0.2461 0.3546	0.2660	0.3018	0.3036	0.3113	Ave		0.2972				13.0		15.0			
Toluene	2.0335 2.4081	2.1481	2.0452	2.0049	2.1647	Ave		2.1341				7.0		15.0			
trans-1,3-Dichloropropene	0.3834 0.6923	0.4261	0.4661	0.5171	0.5955	Qua	-0.207	0.5016	0.0049						1.0000		0.9900
Ethyl methacrylate	0.3855 0.6573	0.4366	0.5000	0.5368	0.5946	Lin1	-0.374	0.6353							0.9950		0.9900
1,1,2-Trichloroethane	0.3513 0.3794	0.3500	0.3495	0.3401	0.3596	Ave		0.3550				3.8		15.0			
1,3-Dichloropropane	0.7041 0.8219	0.7485	0.7309	0.7176	0.7566	Ave		0.7466				5.6		15.0			
Tetrachloroethene	0.2394 0.2779	0.2485	0.2456	0.2474	0.2555	Ave		0.2524				5.4		15.0			
2-Hexanone	0.2555 0.3273	0.2530	0.2844	0.2914	0.3021	Ave		0.2856				9.9		15.0			
Dibromochloromethane	0.1965 0.3239	0.2072	0.2257	0.2453	0.2777	Qua	-0.067	0.2326	0.0023						1.0000		0.9900
1,2-Dibromoethane	0.2819 0.3505	0.3047	0.3100	0.3178	0.3332	Ave		0.3163				7.5		15.0			
Chlorobenzene	1.0721 1.2059	1.1200	1.0795	1.0433	1.1272	Ave		1.1080			0.3000	5.2		15.0			
1,1,1,2-Tetrachloroethane	0.2433 0.3561	0.2660	0.2702	0.2948	0.3211	Ave		0.2919				14.0		15.0			
Ethylbenzene	0.5250 0.6926	0.5782	0.5894	0.5867	0.6324	Ave		0.6007				9.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6327 0.9012	0.7126	0.7222	0.7393	0.8059	Ave		0.7523				12.0		15.0			
o-Xylene	0.6506 0.8703	0.7179	0.7372	0.7408	0.8089	Ave		0.7543				10.0		15.0			
Styrene	0.9693 1.4883	1.0506	1.1070	1.1627	1.3150	Lin1	-0.754	1.4178							0.9920		0.9900
Bromoform	0.0819 0.1516	0.0895	0.0988	0.1100	0.1259	Qua	-0.031	0.1013	0.0013		0.1000				1.0000		0.9900
Isopropylbenzene	1.4947 2.1214	1.6455	1.7370	1.7894	1.9033	Ave		1.7819				12.0		15.0			
1,1,2,2-Tetrachloroethane	0.9920 1.0231	1.0892	1.0509	1.0781	1.0457	Ave		1.0465			0.3000	3.4		15.0			
Bromobenzene	0.6528 0.7862	0.7346	0.7241	0.7347	0.7560	Ave		0.7314				6.1		15.0			
1,2,3-Trichloropropane	0.2749 0.2747	0.2936	0.2771	0.2874	0.2758	Ave		0.2806				2.8		15.0			
trans-1,4-Dichloro-2-butene	0.2602 0.3393	0.2990	0.2853	0.3115	0.3150	Ave		0.3017				9.0		15.0			
n-Propylbenzene	0.6560 0.9449	0.7868	0.8024	0.8571	0.8933	Ave		0.8234				12.0		15.0			
2-Chlorotoluene	0.7071 0.8315	0.7838	0.7649	0.7981	0.8052	Ave		0.7818				5.5		15.0			
1,3,5-Trimethylbenzene	2.2287 3.2654	2.5753	2.7581	2.9169	3.0305	Ave		2.7958				13.0		15.0			
4-Chlorotoluene	0.7086 0.8957	0.8509	0.7967	0.8218	0.8621	Ave		0.8226				7.9		15.0			
tert-Butylbenzene	1.8732 2.6788	2.1545	2.3587	2.4660	2.5571	Ave		2.3480				12.0		15.0			
1,2,4-Trimethylbenzene	2.3218 3.3539	2.7540	2.9061	2.9666	3.1301	Ave		2.9054				12.0		15.0			
sec-Butylbenzene	2.3987 3.5071	2.7725	3.0430	3.1790	3.2957	Ave		3.0327				13.0		15.0			
1,3-Dichlorobenzene	1.3883 1.5034	1.4458	1.4409	1.3903	1.4513	Ave		1.4367				3.0		15.0			
p-Isopropyltoluene	1.8920 2.7941	2.0620	2.3493	2.4668	2.5988	Ave		2.3605				14.0		15.0			
1,4-Dichlorobenzene	1.4766 1.5820	1.5509	1.5101	1.4725	1.5285	Ave		1.5201				2.8		15.0			
n-Butylbenzene	1.9276 2.7241	2.0408	2.2530	2.3479	2.5383	Ave		2.3053				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3922 1.4327	1.4047	1.3988	1.3238	1.4189	Ave		1.3952				2.7		15.0			
1,2-Dibromo-3-Chloropropane	0.0956 0.0865	0.0733	0.0919	0.0855	0.0925	Ave		0.0875				9.1		15.0			
1,3,5-Trichlorobenzene	0.7274 0.6156	0.6578	0.7250	0.6145	0.6672	Ave		0.6679				7.5		15.0			
1,2,4-Trichlorobenzene	0.6586 0.5021	0.5654	0.6525	0.5249	0.5808	Ave		0.5807				11.0		15.0			
Hexachlorobutadiene	0.2419 +++++	0.2174	0.2428	0.2049	0.2005	Ave		0.2215				9.0		15.0			
Naphthalene	1.8396 1.5435	1.5783	2.0618	1.7042	1.8696	Ave		1.7662				11.0		15.0			
1,2,3-Trichlorobenzene	0.5910 +++++	0.4794	0.6204	0.4598	0.4810	Ave		0.5263				14.0		15.0			
Dibromofluoromethane (Surr)	0.2318 0.2635	0.2444	0.2333	0.2312	0.2505	Ave		0.2425				5.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4018 0.4434	0.4134	0.4080	0.3932	0.4073	Ave		0.4112				4.2		15.0			
Toluene-d8 (Surr)	1.4581 1.8629	1.6195	1.6043	1.5883	1.7170	Ave		1.6417				8.3		15.0			
4-Bromofluorobenzene (Surr)	0.5145 0.6364	0.5417	0.5528	0.5472	0.5940	Ave		0.5645				7.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74618/7	UXM6223.D
Level 2	STD8260 240-74618/6	UXM6222.D
Level 3	STD8260 240-74618/5	UXM6221.D
Level 4	STD8260 240-74618/4	UXM6220.D
Level 5	STD8260 240-74618/3	UXM6219.D
Level 6	STD8260 240-74618/2	UXM6218.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	28404 1712717	73607	193977	469409	656299	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	86814 3630166	185425	429176	931837	1725089	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	76868 3482097	171463	419428	902799	1671364	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Lin1	28269 907839	61073	113870	284122	397469	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	51624 2161039	99360	242814	546931	958451	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	33384 1414876	67077	171513	382600	592686	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	106635 5717114	237299	610746	1369698	2264893	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	50197 2544773	112325	264263	614186	1098120	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	21924 1005071	41596	111684	271070	378578	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Ave	56002 2087920	94290	253126	519561	823070	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	54971 2806095	131502	293426	663731	1215091	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	154570 9337667	343544	837393	2051747	3808216	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	85937 4008950	138795	435660	881041	1289768	10.0 400	20.0	50.0	100	200
Methyl acetate	FB	Ave	109857 5097807	228183	578779	1253060	2114479	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Ave	83210 3072281	165336	336998	737824	1349950	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	68451 3198844	116302	366885	759643	1054257	20.0 800	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	49928 2494322	106535	278114	602739	1025974	2.00 80.0	4.00	10.0	20.0	40.0
Methyl tert-butyl ether	FB	Ave	156247 8475915	353949	833418	1920922	3505105	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	57529 2893626	127674	293211	672825	1257183	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	12507 596889	22809	70392	161753	220100	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	120961 6298542	283458	639861	1444562	2694332	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	8345 544837	17361	49600	120884	226041	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	66331 2788599	110621	323989	668392	1152551	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	57697 2996177	137786	310776	688203	1296656	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	48279 2809500	112497	258406	632496	1201927	1.00 40.0	2.00	5.00	10.0	20.0
Bromochloromethane	FB	Ave	23716 1129709	49584	114354	262490	482953	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Lin1	34384 899291	47212	103790	227631	362289	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	97739 5079215	228800	521160	1167208	2183823	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	57624 3361291	133792	328437	776023	1406705	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	103283 5838544	226229	617528	1515923	2357744	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	77687 4375600	184903	439818	1018098	1830835	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	35134 2298482	80975	201930	512214	935181	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	88153 4524202	201014	457492	1020765	1911236	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	261845 13488983	586414	1317538	2975425	5592617	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	43418 2241595	99472	232325	513220	953858	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	69739 4111947	148686	446428	1077195	1564761	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	58863 3373545	138753	322445	750578	1404922	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	27463 1441320	63676	152606	333629	608988	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Qua	19194 846190	27266	110073	202552	324746	50.0 2000	100	250	500	1000
Bromodichloromethane	FB	Ave	47329 3386688	119432	291163	700566	1387012	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Lin1	34945 3125059	88752	266069	637205	1228381	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Qua	53686 4436724	135855	352712	863758	1755573	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	84477 5678433	200832	552908	1266770	2308897	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	207734 12574206	496724	1180110	2650077	5053709	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Qua	39162 3614734	98538	268937	683494	1390384	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Lin1	39384 3432409	100957	288498	709574	1388126	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	35887 1981202	80940	201649	449577	839522	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	71928 4291743	173086	421775	948502	1766329	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	24451 1451196	57464	141722	326986	596505	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	52200 3418493	116989	328261	770326	1410650	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Qua	20072 1691339	47908	130222	324284	648281	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	28799 1829977	70462	178865	420016	777958	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	109520 6296907	258982	622891	1379001	2631678	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	24851 1859457	61518	155927	389674	749553	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	53631 3616525	133705	340109	775457	1476478	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	129261 9411577	329546	833471	1954316	3762800	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	66463 4544528	166000	425382	979114	1888492	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Lin1	99020 7771449	242940	638747	1536793	3070115	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Qua	8368 791745	20693	57025	145384	293901	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	152694 11077031	380497	1002284	2365165	4443528	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	52671 2708592	120357	302994	668555	1204851	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	34660 2081254	81176	208789	455634	871110	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	14594 727282	32437	79908	178249	317817	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Ave	13818 898157	33041	82266	193197	362995	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	34829 2501434	86937	231343	531490	1029247	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	37545 2201400	86612	220554	494931	927703	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	118336 8644914	284565	795243	1808875	3491740	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	37625 2371171	94028	229699	509610	993281	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	99458 7091816	238068	680062	1529225	2946343	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	123278 8879129	304315	837897	1839649	3606483	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	127361 9284597	306350	877373	1971389	3797311	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	73714 3980142	159756	415460	862133	1672245	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	100455 7397020	227849	677374	1529719	2994388	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	78401 4188283	171368	435402	913116	1761158	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	102348 7211711	225506	649610	1456015	2924653	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	73917 3792920	155212	403310	820898	1634849	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	5075 228925	8099	26500	53019	106576	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	38624 1629828	72689	209028	381078	768759	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	34969 1329284	62479	188135	325493	669197	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	12842 +++++	24024	69999	127085	231026	1.00 +++++	2.00	5.00	10.0	20.0
Naphthalene	DCB	Ave	97672 4086284	174396	594460	1056852	2154118	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	31381 +++++	52974	178875	285164	554244	1.00 +++++	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	39794 2109419	92231	213731	482403	929141	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	68965 3550375	156033	373802	820237	1510566	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	148958 9727197	374499	925748	2099366	4008648	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	52560 3322806	125267	319007	723323	1386877	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:
Ave = Average ISTD
Linl = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2922	0.3425		2.00	0.0100	17.2	50.0
Diisopropyl ether	Ave	0.2920	0.2760		10.0	0.0100	-5.5	50.0
Isobutyl alcohol	Ave	0.0074	0.0093		50.0	0.500	25.3	50.0
Cyclohexanone	Ave	0.0930	0.0304		20.0	0.200	-67.3*	50.0
1,2,3-Trimethylbenzene	Ave	2.644	2.994		0.0113	0.0100	13.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.2524		1.00	0.0100	27.4	50.0
Chloromethane	Ave	0.4718	0.4832	0.1000	1.00	0.0100	2.4	50.0
Vinyl chloride	Ave	0.4464	0.4783		1.00	0.0100	7.1	20.0
Bromomethane	Lin1		0.1130		1.00	0.0100	-5.4	50.0
Chloroethane	Ave	0.2699	0.2696		1.00	0.0100	-0.1	50.0
Trichlorofluoromethane	Ave	0.1799	0.2258		1.00	0.0100	25.5	50.0
Acrolein	Ave	0.0650	0.0737		20.0	0.0300	13.4	50.0
1,1-Dichloroethene	Ave	0.2978	0.2814		1.00	0.0100	-5.5	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1469		1.00	0.0100	22.9	50.0
Acetone	Ave	0.1320	0.1147		10.0	0.0200	-13.1	50.0
Iodomethane	Ave	0.3309	0.3093		1.00	0.0100	-6.5	50.0
Carbon disulfide	Ave	0.9836	0.8873		1.00	0.0100	-9.8	50.0
Acetonitrile	Ave	0.0436	0.0440		20.0	0.0300	1.1	50.0
Methyl acetate	Ave	0.3070	0.2874		10.0	0.0100	-6.4	50.0
Methylene Chloride	Ave	0.3987	0.3316		1.00	0.0100	-16.8	50.0
tert-Butyl alcohol	Ave	0.0180	0.0180		50.0	0.200	0.4	50.0
Acrylonitrile	Ave	0.1462	0.1386		20.0	0.0300	-5.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8619		1.00	0.0100	-9.0	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3069		1.00	0.0100	-8.7	50.0
Hexane	Ave	0.0703	0.0802		1.00	0.0100	14.1	20.0
1,1-Dichloroethane	Ave	0.7266	0.6707	0.1000	1.00	0.0100	-7.7	50.0
Vinyl acetate	Ave	0.0560	0.0587		2.00	0.0100	4.8	50.0
2-Butanone	Ave	0.1677	0.1588		10.0	0.0200	-5.3	50.0
2,2-Dichloropropane	Ave	0.3066	0.2711		1.00	0.0100	-11.6	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3183		1.00	0.0100	-8.8	50.0
Bromochloromethane	Ave	0.1319	0.1204		1.00	0.0100	-8.7	50.0
Tetrahydrofuran	Lin1		0.1040		5.00	0.0100	-7.0	50.0
Chloroform	Ave	0.5879	0.5420		1.00	0.0100	-7.8	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3399		1.00	0.0100	-8.1	50.0
Cyclohexane	Ave	0.6611	0.6987		1.00	0.0100	5.7	50.0
1,1-Dichloropropene	Ave	0.4918	0.4846		1.00	0.0100	-1.5	50.0
Carbon tetrachloride	Ave	0.2374	0.2244		1.00	0.0100	-5.5	50.0
1,2-Dichloroethane	Ave	0.5192	0.4963		1.00	0.0100	-4.4	50.0
Benzene	Ave	1.523	1.401		1.00	0.0100	-8.0	50.0
Trichloroethene	Ave	0.2589	0.2498		1.00	0.0100	-3.5	50.0
1,2-Dichloropropane	Ave	0.3704	0.3538		1.00	0.0100	-4.5	20.0
Methylcyclohexane	Ave	0.4566	0.5013		1.00	0.0100	9.8	50.0
Dibromomethane	Ave	0.1666	0.1629		1.00	0.0100	-2.2	50.0
Bromodichloromethane	Ave	0.3405	0.3196		1.00	0.0100	-6.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.1380		10.0	0.0100	-12.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Qua		0.3718		1.00	0.0100	-10.9	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2941		10.0	0.0200	-1.1	50.0
Toluene	Ave	2.134	1.974		1.00	0.0100	-7.5	20.0
trans-1,3-Dichloropropene	Qua		0.4752		1.00	0.0100	-9.2	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3402		1.00	0.0100	-4.2	50.0
1,3-Dichloropropane	Ave	0.7466	0.7102		1.00	0.0100	-4.9	50.0
Tetrachloroethene	Ave	0.2524	0.2492		1.00	0.0100	-1.3	50.0
2-Hexanone	Ave	0.2856	0.2769		10.0	0.0200	-3.1	50.0
Dibromochloromethane	Qua		0.2262		1.00	0.0100	-8.3	50.0
1,2-Dibromoethane	Ave	0.3163	0.2994		1.00	0.0100	-5.4	50.0
Chlorobenzene	Ave	1.108	1.043	0.3000	1.00	0.0100	-5.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.2752		1.00	0.0100	-5.7	50.0
Ethylbenzene	Ave	0.6007	0.5731		1.00	0.0100	-4.6	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.7296		2.00	0.0200	-3.0	50.0
o-Xylene	Ave	0.7543	0.7415		1.00	0.0100	-1.7	50.0
Styrene	Linl		1.192		1.00	0.0100	-10.6	50.0
Bromoform	Qua		0.1002	0.1000	1.00	0.0100	-8.6	50.0
Isopropylbenzene	Ave	1.782	1.763		1.00	0.0100	-1.1	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9414	0.3000	1.00	0.0100	-10.0	50.0
Bromobenzene	Ave	0.7314	0.6863		1.00	0.0100	-6.2	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2663		1.00	0.0100	-5.1	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.2780		1.00	0.0200	-7.9	50.0
n-Propylbenzene	Ave	0.8234	0.8304		1.00	0.0100	0.8	50.0
2-Chlorotoluene	Ave	0.7818	0.7600		1.00	0.0100	-2.8	50.0
1,3,5-Trimethylbenzene	Ave	2.796	2.751		1.00	0.0100	-1.6	50.0
4-Chlorotoluene	Ave	0.8226	0.7820		1.00	0.0100	-4.9	50.0
tert-Butylbenzene	Ave	2.348	2.325		1.00	0.0100	-1.0	50.0
1,2,4-Trimethylbenzene	Ave	2.905	2.871		1.00	0.0100	-1.2	50.0
sec-Butylbenzene	Ave	3.033	3.010		1.00	0.0100	-0.8	50.0
1,3-Dichlorobenzene	Ave	1.437	1.335		1.00	0.0100	-7.1	50.0
p-Isopropyltoluene	Ave	2.361	2.460		1.00	0.0100	4.2	50.0
1,4-Dichlorobenzene	Ave	1.520	1.416		1.00	0.0100	-6.8	50.0
n-Butylbenzene	Ave	2.305	2.347		1.00	0.0100	1.8	50.0
1,2-Dichlorobenzene	Ave	1.395	1.318		1.00	0.0100	-5.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0884		2.00	0.0100	0.9	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.5692		1.00	0.0100	-2.0	50.0
Hexachlorobutadiene	Ave	0.2215	0.1995		1.00	0.0100	-9.9	50.0
Naphthalene	Ave	1.766	2.025		1.00	0.0100	14.7	50.0
1,2,3-Trichlorobenzene	Ave	0.5263	0.5412		1.00	0.0100	2.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2031		0.00855	0.0102	-16.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3469		0.00861	0.0102	-15.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.642	1.430		0.00889	0.0102	-12.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.5199		0.00940	0.0102	-7.9	50.0

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A3UX16 Start Date: 04/10/2013 12:23

Analysis Batch Number: 81347 End Date: 04/10/2013 23:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-81347/1		04/10/2013 12:23	1	BFB3562.D	DB-624 0.18(mm)
CCVIS 240-81347/2		04/10/2013 13:39	1	UXM7362.D	DB-624 0.18(mm)
CCV 240-81347/3		04/10/2013 14:02	1	UXM7363.D	DB-624 0.18(mm)
LCS 240-81347/4		04/10/2013 14:25	1	UXM7364.D	DB-624 0.18(mm)
MB 240-81347/6		04/10/2013 15:11	1	UXM7366.D	DB-624 0.18(mm)
ZZZZZ		04/10/2013 15:33	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 15:56	2.5		DB-624 0.18(mm)
240-22783-3	MRC-MW--71A-040313	04/10/2013 16:19	1	UXM7369.D	DB-624 0.18(mm)
240-22783-6	MRC-MW12B-040313	04/10/2013 16:42	10	UXM7370.D	DB-624 0.18(mm)
240-22783-7	MRC-MW63A-040313	04/10/2013 17:04	1	UXM7371.D	DB-624 0.18(mm)
240-22783-8	MRC-MW70A-040313	04/10/2013 17:27	1	UXM7372.D	DB-624 0.18(mm)
240-22783-9	MRC-MW70B-040313	04/10/2013 17:49	2	UXM7373.D	DB-624 0.18(mm)
ZZZZZ		04/10/2013 18:11	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 18:34	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 18:56	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 19:18	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 20:03	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 20:25	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 20:48	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 21:10	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 21:32	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 21:55	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 22:17	1		DB-624 0.18(mm)
ZZZZZ		04/10/2013 22:39	1		DB-624 0.18(mm)
240-22773-G-1 MS		04/10/2013 23:02	2.5	UXM7387.D	DB-624 0.18(mm)
240-22773-G-1 MSD		04/10/2013 23:25	2.5	UXM7388.D	DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: BFB3562.D BFB Injection Date: 04/10/2013

Instrument ID: A3UX16 BFB Injection Time: 12:23

Analysis Batch No.: 81347

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	54.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.2	(0.3)1
174	50.0 - 120.00 % of mass 95	55.5	
175	5.0 - 9.0 % of mass 174	4.0	(7.3)1
176	95.0 - 101.0 % of mass 174	54.1	(97.4)1
177	5.0 - 9.0 % of mass 176	3.5	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81347/2	UXM7362.D	04/10/2013	13:39
	CCV 240-81347/3	UXM7363.D	04/10/2013	14:02
	LCS 240-81347/4	UXM7364.D	04/10/2013	14:25
	MB 240-81347/6	UXM7366.D	04/10/2013	15:11
MRC-MW--71A-040313	240-22783-3	UXM7369.D	04/10/2013	16:19
MRC-MW12B-040313	240-22783-6	UXM7370.D	04/10/2013	16:42
MRC-MW63A-040313	240-22783-7	UXM7371.D	04/10/2013	17:04
MRC-MW70A-040313	240-22783-8	UXM7372.D	04/10/2013	17:27
MRC-MW70B-040313	240-22783-9	UXM7373.D	04/10/2013	17:49
	240-22773-G-1 MS	UXM7387.D	04/10/2013	23:02
	240-22773-G-1 MSD	UXM7388.D	04/10/2013	23:25

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVIS 240-81347/2 Calibration Date: 04/10/2013 13:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7362.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.3257		1.00	0.0100	64.5*	50.0
Chloromethane	Ave	0.4718	0.5051	0.1000	1.00	0.0100	7.1	50.0
Vinyl chloride	Ave	0.4464	0.4590		1.00	0.0100	2.8	20.0
Bromomethane	Lin1		0.1315		1.00	0.0100	11.2	50.0
Chloroethane	Ave	0.2699	0.1719		1.00	0.0100	-36.3	50.0
Trichlorofluoromethane	Ave	0.1799	0.3460		1.00	0.0100	92.3*	50.0
Acrolein	Ave	0.0650	0.0553		20.0	0.100	-14.9	50.0
1,1-Dichloroethene	Ave	0.2978	0.2906		1.00	0.0100	-2.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1436		1.00	0.0100	20.1	50.0
Acetone	Ave	0.1320	0.1127		10.0	0.0200	-14.6	50.0
Iodomethane	Ave	0.3309	0.3945		1.00	0.0100	19.2	50.0
Carbon disulfide	Ave	0.9836	0.8710		1.00	0.0100	-11.4	50.0
Acetonitrile	Ave	0.0436	0.0490		20.0	0.100	12.4	50.0
Methyl acetate	Ave	0.3070	0.2862		10.0	0.0200	-6.8	50.0
Methylene Chloride	Ave	0.3987	0.4042		1.00	0.0100	1.4	50.0
tert-Butyl alcohol	Ave	0.0180	0.0172		50.0	0.200	-4.2	50.0
Acrylonitrile	Ave	0.1462	0.1388		20.0	0.0200	-5.0	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8082		1.00	0.0100	-14.7	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3272		1.00	0.0100	-2.7	50.0
Hexane	Ave	0.0703	0.0558		1.00	0.0100	-20.5*	20.0
1,1-Dichloroethane	Ave	0.7266	0.6868	0.1000	1.00	0.0100	-5.5	50.0
Vinyl acetate	Ave	0.0560	0.0538		2.00	0.0100	-3.9	50.0
2-Butanone	Ave	0.1677	0.1532		10.0	0.0200	-8.7	50.0
2,2-Dichloropropane	Ave	0.3066	0.2599		1.00	0.0100	-15.2	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3457		1.00	0.0100	-1.0	50.0
Bromochloromethane	Ave	0.1319	0.1351		1.00	0.0100	2.4	50.0
Tetrahydrofuran	Lin1		0.0982		5.00	0.0100	-12.5	50.0
Chloroform	Ave	0.5879	0.5778		1.00	0.0100	-1.7	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3429		1.00	0.0100	-7.3	50.0
Cyclohexane	Ave	0.6611	0.5913		1.00	0.0100	-10.6	50.0
1,1-Dichloropropene	Ave	0.4918	0.4880		1.00	0.0100	-0.8	50.0
Carbon tetrachloride	Ave	0.2374	0.2364		1.00	0.0100	-0.4	50.0
1,2-Dichloroethane	Ave	0.5192	0.5099		1.00	0.0100	-1.8	50.0
Benzene	Ave	1.523	1.562		1.00	0.0100	2.6	50.0
Trichloroethene	Ave	0.2589	0.2722		1.00	0.0100	5.1	50.0
1,2-Dichloropropane	Ave	0.3704	0.3864		1.00	0.0100	4.3	20.0
Methylcyclohexane	Ave	0.4566	0.3838		1.00	0.0100	-15.9	50.0
Dibromomethane	Ave	0.1666	0.1627		1.00	0.0100	-2.3	50.0
1,4-Dioxane	Qua		0.0028		50.0	0.500	57.2*	50.0
Bromodichloromethane	Ave	0.3405	0.3367		1.00	0.0100	-1.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVIS 240-81347/2 Calibration Date: 04/10/2013 13:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7362.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Lin1		0.1610		10.0	0.0200	-6.4	50.0
cis-1,3-Dichloropropene	Qua		0.4137		1.00	0.0100	-2.0	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2778		10.0	0.0200	-6.5	50.0
Toluene	Ave	2.134	2.135		1.00	0.0100	0.0	20.0
trans-1,3-Dichloropropene	Qua		0.4871		1.00	0.0100	-7.2	50.0
Ethyl methacrylate	Lin1		0.5271		1.00	0.0100	-11.2	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3550		1.00	0.0100	0.0	50.0
1,3-Dichloropropane	Ave	0.7466	0.7528		1.00	0.0100	0.8	50.0
Tetrachloroethene	Ave	0.2524	0.2663		1.00	0.0100	5.5	50.0
2-Hexanone	Ave	0.2856	0.2729		10.0	0.0200	-4.5	50.0
Dibromochloromethane	Qua		0.2511		1.00	0.0100	0.7	50.0
1,2-Dibromoethane	Ave	0.3163	0.3117		1.00	0.0100	-1.5	50.0
Chlorobenzene	Ave	1.108	1.138	0.3000	1.00	0.0100	2.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.3087		1.00	0.0100	5.8	50.0
Ethylbenzene	Ave	0.6007	0.6215		1.00	0.0100	3.5	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.7928		2.00	0.0200	5.4	50.0
o-Xylene	Ave	0.7543	0.7698		1.00	0.0100	2.1	50.0
Styrene	Lin1		1.235		1.00	0.0100	-7.6	50.0
Bromoform	Qua		0.1023	0.1000	1.00	0.0100	-6.9	50.0
Isopropylbenzene	Ave	1.782	1.767		1.00	0.0100	-0.8	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9662	0.3000	1.00	0.0100	-7.7	50.0
Bromobenzene	Ave	0.7314	0.7669		1.00	0.0100	4.9	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2615		1.00	0.0100	-6.8	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.2054		1.00	0.0100	-31.9	50.0
n-Propylbenzene	Ave	0.8234	0.8613		1.00	0.0100	4.6	50.0
2-Chlorotoluene	Ave	0.7818	0.8098		1.00	0.0100	3.6	50.0
1,3,5-Trimethylbenzene	Ave	2.796	2.927		1.00	0.0100	4.7	50.0
4-Chlorotoluene	Ave	0.8226	0.8406		1.00	0.0100	2.2	50.0
tert-Butylbenzene	Ave	2.348	2.429		1.00	0.0100	3.5	50.0
1,2,4-Trimethylbenzene	Ave	2.905	3.053		1.00	0.0100	5.1	50.0
sec-Butylbenzene	Ave	3.033	3.140		1.00	0.0100	3.6	50.0
1,3-Dichlorobenzene	Ave	1.437	1.456		1.00	0.0100	1.3	50.0
p-Isopropyltoluene	Ave	2.361	2.532		1.00	0.0100	7.3	50.0
1,4-Dichlorobenzene	Ave	1.520	1.533		1.00	0.0100	0.9	50.0
n-Butylbenzene	Ave	2.305	2.359		1.00	0.0100	2.3	50.0
1,2-Dichlorobenzene	Ave	1.395	1.439		1.00	0.0100	3.2	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0770		2.00	0.0100	-12.1	50.0
1,3,5-Trichlorobenzene	Ave	0.6679	0.7571		1.00	0.0100	13.3	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.6559		1.00	0.0100	13.0	50.0
Hexachlorobutadiene	Ave	0.2215	0.2669		1.00	0.0100	20.5	50.0
Naphthalene	Ave	1.766	1.924		1.00	0.0100	8.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVIS 240-81347/2 Calibration Date: 04/10/2013 13:39

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7362.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5263	0.6450		1.00	0.0100	22.5	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2039		0.00859	0.0102	-15.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3415		0.00848	0.0102	-17.0	50.0
Toluene-d8 (Surr)	Ave	1.642	1.453		0.00903	0.0102	-11.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.4925		0.00891	0.0102	-12.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-81347/3 Calibration Date: 04/10/2013 14:02

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM7363.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5937	0.5998		2.00	0.0100	1.0	50.0
Ethyl ether	Ave	0.2922	0.3416		2.00	0.0100	16.9	50.0
3-Chloro-1-propene	Ave	0.1704	0.1626		2.00	0.0100	-4.6	50.0
Diisopropyl ether	Ave	0.2920	0.3158		10.0	0.0500	8.2	50.0
2-Chloro-1,3-butadiene	Ave	0.5805	0.6653		2.00	0.0100	14.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	1.022	0.9711		5.00	0.0100	-5.0	50.0
Propionitrile	Ave	0.0381	0.0477		4.00	0.0200	25.0	50.0
Ethyl acetate	Ave	0.2509	0.3136		4.00	0.0200	25.0	50.0
Methacrylonitrile	Ave	0.1909	0.2216		2.00	0.0100	16.1	50.0
Isobutyl alcohol	Ave	0.0074	0.0089		50.0	0.200	19.7	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.8526	0.6995		5.00	0.0100	-18.0	50.0
n-Heptane	Ave	0.0536	0.0418		1.00	0.0100	-21.9	50.0
n-Butanol	Ave	0.0051	0.0054		50.0	0.200	7.4	50.0
Methyl methacrylate	Ave	0.2196	0.2514		2.00	0.0100	14.5	50.0
2-Nitropropane	Ave	0.0428	0.0399		2.00	0.0200	-6.7	50.0
Cyclohexanone	Ave	0.0930	0.1484		20.0	0.100	59.6*	50.0
1,2,3-Trimethylbenzene	Ave	2.644	3.318		0.0125	0.0100	25.5	50.0
2-Methylnaphthalene	Ave	0.9440	0.6433		5.00	0.0200	-31.9	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: UXM7366.D Lab Sample ID: MB 240-81347/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/10/2013 15:11

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81347/4	UXM7364.D	04/10/2013 14:25
MRC-MW--71A-040313	240-22783-3	UXM7369.D	04/10/2013 16:19
MRC-MW12B-040313	240-22783-6	UXM7370.D	04/10/2013 16:42
MRC-MW63A-040313	240-22783-7	UXM7371.D	04/10/2013 17:04
MRC-MW70A-040313	240-22783-8	UXM7372.D	04/10/2013 17:27
MRC-MW70B-040313	240-22783-9	UXM7373.D	04/10/2013 17:49
	240-22773-G-1 MS	UXM7387.D	04/10/2013 23:02
	240-22773-G-1 MSD	UXM7388.D	04/10/2013 23:25

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81347/6

Matrix: Water | Lab File ID: UXM7366.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 15:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.295	J	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81347/6

Matrix: Water | Lab File ID: UXM7366.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/10/2013 15:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.45		1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81347/6

Matrix: Water Lab File ID: UXM7366.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 15:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81347/6

Matrix: Water Lab File ID: UXM7366.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/10/2013 15:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81347 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7364.D

Lab ID: LCS 240-81347/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	17.6	88	43-136	
Benzene	10.0	10.1	101	83-112	
Bromobenzene	10.0	9.86	99	76-115	
Bromochloromethane	10.0	9.64	96	77-120	
Bromodichloromethane	10.0	9.64	96	72-121	
Bromoform	10.0	8.69	87	40-131	
Bromomethane	10.0	9.39	94	11-185	
2-Butanone	20.0	17.9	90	60-126	
Carbon disulfide	10.0	8.17	82	62-142	
Carbon tetrachloride	10.0	9.06	91	66-128	
Chlorobenzene	10.0	9.97	100	85-110	
Chloroethane	10.0	5.28	53	25-153	
2-Chloroethyl vinyl ether	10.0	8.72 J	87	52-131	
Chloroform	10.0	9.44	94	79-117	
Chloromethane	10.0	9.32	93	44-126	
2-Chlorotoluene	10.0	9.73	97	76-116	
4-Chlorotoluene	10.0	9.68	97	77-115	
cis-1,2-Dichloroethene	10.0	9.40	94	80-113	
cis-1,3-Dichloropropene	10.0	8.77	88	61-115	
Dibromochloromethane	10.0	9.22	92	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.28	83	42-136	
1,2-Dibromoethane	10.0	9.57	96	79-113	
Dibromomethane	10.0	9.87	99	81-120	
1,2-Dichlorobenzene	10.0	9.95	100	81-110	
1,3-Dichlorobenzene	10.0	9.56	96	80-110	
1,4-Dichlorobenzene	10.0	9.61	96	82-110	
Dichlorodifluoromethane	10.0	10.4	104	19-129	
1,1-Dichloroethane	10.0	9.40	94	82-115	
1,2-Dichloroethane	10.0	9.88	99	71-127	
1,1-Dichloroethene	10.0	9.05	91	78-131	
1,2-Dichloropropane	10.0	10.1	101	81-115	
1,3-Dichloropropane	10.0	9.90	99	79-116	
2,2-Dichloropropane	10.0	7.75	77	50-129	
1,1-Dichloropropene	10.0	9.58	96	83-114	
Diisopropyl ether	10.0	9.71	97	77-118	
Ethylbenzene	10.0	9.76	98	83-112	
Hexachlorobutadiene	10.0	9.63	96	36-134	
2-Hexanone	20.0	19.2	96	55-133	
Isopropylbenzene	10.0	9.49	95	75-114	
Methylene Chloride	10.0	9.95	99	66-131	
4-Methyl-2-pentanone	20.0	18.5	93	63-128	
Methyl tert-butyl ether	10.0	8.18	82	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7364.D

Lab ID: LCS 240-81347/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.1	101	83-113	
Naphthalene	10.0	9.23	92	32-141	
n-Butylbenzene	10.0	9.75	98	66-125	
n-Propylbenzene	10.0	10.2	102	74-121	
o-Xylene	10.0	9.77	98	83-113	
p-Isopropyltoluene	10.0	10.3	103	74-120	
sec-Butylbenzene	10.0	9.60	96	70-117	
Styrene	10.0	9.00	90	79-114	
tert-Butyl alcohol	200	179	90	70-130	
tert-Butylbenzene	10.0	9.85	98	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.1	101	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.57	86	68-118	
Tetrachloroethene	10.0	10.0	100	79-114	
Toluene	10.0	9.59	96	84-111	
trans-1,2-Dichloroethene	10.0	9.12	91	83-117	
trans-1,3-Dichloropropene	10.0	8.58	86	58-117	
1,2,3-Trichlorobenzene	10.0	10.1	101	54-126	
1,2,4-Trichlorobenzene	10.0	9.68	97	48-135	
1,1,1-Trichloroethane	10.0	8.54	85	74-118	
Trichloroethene	10.0	9.88	99	76-117	
Trichlorofluoromethane	10.0	17.9	179	49-157	*
1,2,3-Trichloropropane	10.0	8.77	88	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.1	121	74-151	
1,2,3-Trimethylbenzene	10.0	11.8	118	70-130	
1,2,4-Trimethylbenzene	10.0	10.1	101	76-120	
Vinyl acetate	10.0	7.55	75	46-161	
Vinyl chloride	10.0	9.11	91	53-127	
Xylenes, Total	30.0	29.9	100	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7387.D

Lab ID: 240-22773-G-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	50.0	3.1 J	41.0	76	33-145	
Benzene	25.0	2.5 U	25.4	102	72-121	
Bromobenzene	25.0	2.5 U	24.6	98	71-116	
Bromochloromethane	25.0	2.5 U	24.4	98	73-121	
Bromodichloromethane	25.0	2.5 U	23.5	94	67-120	
Bromoform	25.0	2.5 U	19.9	80	32-128	
Bromomethane	25.0	2.5 U	28.1	112	10-186	
2-Butanone	50.0	13 U	40.4	81	54-129	
Carbon disulfide	25.0	2.5 U	20.9	84	57-147	
Carbon tetrachloride	25.0	2.5 U	22.7	91	59-129	
Chlorobenzene	25.0	2.5 U	24.6	98	80-110	
Chloroethane	25.0	2.5 U	16.4	66	21-165	
2-Chloroethyl vinyl ether	25.0	25 U	25 U	0	10-150	F
Chloroform	25.0	2.5 U	24.2	97	76-118	
Chloromethane	25.0	2.5 U	23.9	96	33-132	
2-Chlorotoluene	25.0	2.5 U	24.7	99	69-117	
4-Chlorotoluene	25.0	2.5 U	24.5	98	71-116	
cis-1,2-Dichloroethene	25.0	58	82.5	97	70-120	
cis-1,3-Dichloropropene	25.0	2.5 U	19.7	79	51-110	
Dibromochloromethane	25.0	2.5 U	22.0	88	56-118	
1,2-Dibromo-3-Chloropropane	25.0	13 U	18.3	73	32-139	
1,2-Dibromoethane	25.0	2.5 U	23.0	92	74-113	
Dibromomethane	25.0	2.5 U	24.3	97	77-121	
1,2-Dichlorobenzene	25.0	2.5 U	24.9	100	75-111	
1,3-Dichlorobenzene	25.0	2.5 U	23.9	96	73-110	
1,4-Dichlorobenzene	25.0	2.5 U	24.1	96	75-110	
Dichlorodifluoromethane	25.0	2.5 U	28.1	112	17-128	
1,1-Dichloroethane	25.0	2.5 U	23.9	96	79-116	
1,2-Dichloroethane	25.0	2.5 U	24.7	99	68-129	
1,1-Dichloroethene	25.0	2.5 U	23.5	94	74-135	
1,2-Dichloropropane	25.0	2.5 U	24.9	100	78-115	
1,3-Dichloropropane	25.0	2.5 U	24.5	98	74-118	
2,2-Dichloropropane	25.0	2.5 U	17.1	69	38-127	
1,1-Dichloropropene	25.0	2.5 U	24.1	96	80-114	
Diisopropyl ether	25.0	13 U	23.1	92	73-118	
Ethylbenzene	25.0	2.5 U	24.2	97	75-116	
Hexachlorobutadiene	25.0	2.5 U	22.8	91	27-132	
2-Hexanone	50.0	13 U	43.0	86	47-139	
Isopropylbenzene	25.0	2.5 U	23.4	94	68-116	
Methylene Chloride	25.0	1.2 J	23.3	89	63-128	
4-Methyl-2-pentanone	50.0	13 U	41.6	83	56-131	
Methyl tert-butyl ether	25.0	2.5 U	19.2	77	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7387.D

Lab ID: 240-22773-G-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	50.0	5.0 U	50.6	101	75-117	
Naphthalene	25.0	2.5 U	20.4	81	15-158	
n-Butylbenzene	25.0	2.5 U	23.0	92	56-127	
n-Propylbenzene	25.0	2.5 U	24.6	98	64-124	
o-Xylene	25.0	2.5 U	24.6	98	76-116	
p-Isopropyltoluene	25.0	2.5 U	24.8	99	64-122	
sec-Butylbenzene	25.0	2.5 U	23.3	93	60-119	
Styrene	25.0	2.5 U	22.3	89	71-117	
tert-Butyl alcohol	500	50 U	345	69	70-130	F
tert-Butylbenzene	25.0	2.5 U	23.7	95	61-119	
1,1,1,2-Tetrachloroethane	25.0	2.5 U	24.4	98	64-118	
1,1,2,2-Tetrachloroethane	25.0	2.5 U	21.4	85	63-122	
Tetrachloroethene	25.0	2.5 U	24.9	99	70-117	
Toluene	25.0	2.5 U	24.2	97	78-114	
trans-1,2-Dichloroethene	25.0	3.2	26.7	94	80-119	
trans-1,3-Dichloropropene	25.0	2.5 U	19.7	79	46-116	
1,2,3-Trichlorobenzene	25.0	2.5 U	23.5	94	45-129	
1,2,4-Trichlorobenzene	25.0	2.5 U	22.0	88	38-138	
1,1,1-Trichloroethane	25.0	2.5 U	21.7	87	68-121	
Trichloroethene	25.0	7.6	32.5	99	66-120	
Trichlorofluoromethane	25.0	2.5 U	46.4	186	46-157	F
1,2,3-Trichloropropane	25.0	2.5 U	22.0	88	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	25.0	2.5 U	32.7	131	70-152	
1,2,3-Trimethylbenzene	25.0	13 U	29.4	118	70-130	
1,2,4-Trimethylbenzene	25.0	2.5 U	24.9	100	67-124	
Vinyl acetate	25.0	5.0 U	16.7	67	43-157	
Vinyl chloride	25.0	65	88.8	96	49-130	
Xylenes, Total	75.0	5.0 U	75.2	100	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7388.D

Lab ID: 240-22773-G-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	50.0	42.5	79	4	30	33-145	
Benzene	25.0	26.1	104	3	30	72-121	
Bromobenzene	25.0	24.3	97	1	30	71-116	
Bromochloromethane	25.0	24.9	100	2	30	73-121	
Bromodichloromethane	25.0	24.1	97	3	30	67-120	
Bromoform	25.0	20.5	82	3	30	32-128	
Bromomethane	25.0	32.4	130	14	30	10-186	
2-Butanone	50.0	42.0	84	4	30	54-129	
Carbon disulfide	25.0	21.7	87	4	30	57-147	
Carbon tetrachloride	25.0	23.8	95	5	30	59-129	
Chlorobenzene	25.0	25.3	101	3	30	80-110	
Chloroethane	25.0	18.7	75	13	30	21-165	
2-Chloroethyl vinyl ether	25.0	25 U	0	NC	30	10-150	F
Chloroform	25.0	25.3	101	4	30	76-118	
Chloromethane	25.0	25.5	102	6	30	33-132	
2-Chlorotoluene	25.0	24.0	96	3	30	69-117	
4-Chlorotoluene	25.0	24.3	97	1	30	71-116	
cis-1,2-Dichloroethene	25.0	83.0	100	1	30	70-120	
cis-1,3-Dichloropropene	25.0	20.1	81	2	30	51-110	
Dibromochloromethane	25.0	22.5	90	2	30	56-118	
1,2-Dibromo-3-Chloropropane	25.0	19.7	79	7	30	32-139	
1,2-Dibromoethane	25.0	22.7	91	1	30	74-113	
Dibromomethane	25.0	24.8	99	2	30	77-121	
1,2-Dichlorobenzene	25.0	25.0	100	0	30	75-111	
1,3-Dichlorobenzene	25.0	24.1	97	1	30	73-110	
1,4-Dichlorobenzene	25.0	23.8	95	1	30	75-110	
Dichlorodifluoromethane	25.0	27.6	110	2	30	17-128	
1,1-Dichloroethane	25.0	24.8	99	4	30	79-116	
1,2-Dichloroethane	25.0	24.8	99	1	30	68-129	
1,1-Dichloroethene	25.0	24.0	96	2	30	74-135	
1,2-Dichloropropane	25.0	25.8	103	4	30	78-115	
1,3-Dichloropropane	25.0	24.4	98	1	30	74-118	
2,2-Dichloropropane	25.0	18.8	75	9	30	38-127	
1,1-Dichloropropene	25.0	24.3	97	1	30	80-114	
Diisopropyl ether	25.0	23.9	96	3	30	73-118	
Ethylbenzene	25.0	24.6	99	2	30	75-116	
Hexachlorobutadiene	25.0	24.1	97	6	30	27-132	
2-Hexanone	50.0	43.7	87	2	30	47-139	
Isopropylbenzene	25.0	23.7	95	1	30	68-116	
Methylene Chloride	25.0	24.2	92	4	30	63-128	
4-Methyl-2-pentanone	50.0	41.6	83	0	30	56-131	
Methyl tert-butyl ether	25.0	20.1	80	5	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7388.D

Lab ID: 240-22773-G-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	50.0	50.2	100	1	30	75-117	
Naphthalene	25.0	21.8	87	7	30	15-158	
n-Butylbenzene	25.0	23.2	93	1	30	56-127	
n-Propylbenzene	25.0	24.3	97	1	30	64-124	
o-Xylene	25.0	25.3	101	3	30	76-116	
p-Isopropyltoluene	25.0	24.8	99	0	30	64-122	
sec-Butylbenzene	25.0	23.4	94	0	30	60-119	
Styrene	25.0	21.9	88	2	30	71-117	
tert-Butyl alcohol	500	376	75	8	30	70-130	
tert-Butylbenzene	25.0	23.4	93	2	30	61-119	
1,1,1,2-Tetrachloroethane	25.0	25.0	100	2	30	64-118	
1,1,2,2-Tetrachloroethane	25.0	21.0	84	2	30	63-122	
Tetrachloroethene	25.0	24.4	97	2	30	70-117	
Toluene	25.0	24.3	97	1	30	78-114	
trans-1,2-Dichloroethene	25.0	27.3	97	2	30	80-119	
trans-1,3-Dichloropropene	25.0	20.0	80	2	30	46-116	
1,2,3-Trichlorobenzene	25.0	25.5	102	8	30	45-129	
1,2,4-Trichlorobenzene	25.0	23.4	94	6	30	38-138	
1,1,1-Trichloroethane	25.0	22.6	90	4	30	68-121	
Trichloroethene	25.0	32.8	101	1	30	66-120	
Trichlorofluoromethane	25.0	45.6	182	2	30	46-157	F
1,2,3-Trichloropropane	25.0	22.1	88	0	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	25.0	31.9	128	2	30	70-152	
1,2,3-Trimethylbenzene	25.0	29.4	117	0	30	70-130	
1,2,4-Trimethylbenzene	25.0	24.4	98	2	30	67-124	
Vinyl acetate	25.0	16.9	68	1	30	43-157	
Vinyl chloride	25.0	90.2	102	2	30	49-130	
Xylenes, Total	75.0	75.5	101	0	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-81120/2		1300981	4.66	869004	7.30	586844	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: CCVIS 240-81120/2 Date Analyzed: 04/09/2013 10:18

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0553.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1300981	4.66	869004	7.30	586844	9.51
UPPER LIMIT		2601962	5.16	1738008	7.80	1173688	10.01
LOWER LIMIT		650491	4.16	434502	6.80	293422	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-81120/3		1323357	4.66	881467	7.30	458162	9.51
LCS 240-81120/4		1462215	4.66	998379	7.30	589209	9.51
MB 240-81120/5		1320818	4.66	958837	7.30	433080	9.51
240-22783-1	TB-040313	1164281	4.67	824264	7.30	400316	9.51
240-22783-2	MRC-MW--71B-040313	1243553	4.67	836617	7.30	402127	9.51
240-22783-2 MS	MRC-MW--71B-040313 MS	1338454	4.66	848563	7.30	573880	9.51
240-22783-2 MSD	MRC-MW--71B-040313 MSD	1371477	4.66	918783	7.30	583312	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: STD8260 240-74618/4 Date Analyzed: 02/07/2013 14:12

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXM6220.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2086115	5.70	1321775	8.39	620128	10.64
UPPER LIMIT		4172230	6.20	2643550	8.89	1240256	11.14
LOWER LIMIT		1043058	5.20	660888	7.89	310064	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-74618/8		1919196	5.70	1214489	8.39	624981	10.64
CCVIS 240-81347/2		2061400	5.70	1343884	8.39	664672	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII

GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: CCVIS 240-81347/2 Date Analyzed: 04/10/2013 13:39

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM7362.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2061400	5.70	1343884	8.39	664672	10.64
UPPER LIMIT		4122800	6.20	2687768	8.89	1329344	11.14
LOWER LIMIT		1030700	5.20	671942	7.89	332336	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-81347/3		1981678	5.70	1204068	8.39	535749	10.64
LCS 240-81347/4		1980227	5.70	1274551	8.39	636948	10.64
MB 240-81347/6		1832125	5.70	1152157	8.39	513035	10.64
240-22783-3	MRC-MW--71A-040313	1812924	5.70	1204857	8.39	507746	10.64
240-22783-6	MRC-MW12B-040313	1770328	5.70	1146944	8.39	487309	10.64
240-22783-7	MRC-MW63A-040313	1748089	5.70	1132462	8.39	484489	10.64
240-22783-8	MRC-MW70A-040313	1747773	5.70	1112241	8.39	488196	10.64
240-22783-9	MRC-MW70B-040313	1723879	5.70	1077094	8.39	472762	10.64
240-22773-G-1 MS		1848142	5.70	1173973	8.39	586898	10.64
240-22773-G-1 MSD		1845509	5.70	1166499	8.39	601549	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

SDG 240-22783

SAMPLE ID MRC-MW12B-040313

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST / IS AMOUNT (NG)	Final Volume (ML)	AVE RRF	CONCENTRATION ug/L
1770328	10	1094582	10	5	0.2589	238.82

Sample Volume (ML)

5

Trichloroethene = 240 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\A3UX16\20130410-18734.b\UXM7370.D
Lims ID: 240-22783-B-6 Client ID: MRC-MW12B-040313
Inject. Date: 10-Apr-2013 16:42:30 Dil. Factor: 10.0000
Sample Type: Client
Sample ID: 240-0018734-010
Misc. Info.: M30410A,8260LLUX16,,1644
Operator: 1644 Instrument ID: A3UX16
Purge Vol: 5.000 mL ALS Bottle#: 10
Lims Batch ID: 81347 Lims Sample ID: 10
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A3UX16\20130410-18734.b\8260_16.m
Last Update: 11-Apr-2013 11:02:13 Calib Date: 07-Feb-2013 15:20:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX16\20130207-17203.b\UXM6223.D
Limit Group: MSV 8260B ICAL
Integrator: RTE ID Type: Deconvolution ID
Column Type: DB-624 Column Dia: 0.18 mm
Process Host: XAWRK032

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.702	5.702	0.0	97	1770328	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.394	0.0	93	1146944	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	487309	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.121	5.109	0.012	55	380507	8.86	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	680099	9.34	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1679746	8.92	
$ 8 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	78	510661	7.89	
14 Dichlorodifluoromethane	85		1.658					
15 Chloromethane	50		1.836					
16 Vinyl chloride	62		1.954					9
17 Bromomethane	94		2.298					
18 Chloroethane	64		2.393					9
20 Trichlorofluoromethane	101		2.666					
24 1,1-Dichloroethene	96	3.152	3.152	0.0	84	129736	2.46	
26 Acetone	43	3.188	3.176	0.012	84	26700	1.14	
25 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
28 Carbon disulfide	76		3.366					9
32 Methylene Chloride	84	3.591	3.591	0.0	95	38082	0.5396	
33 2-Methyl-2-propanol	59		3.674					9
35 trans-1,2-Dichloroethene	96		3.840					9
36 Methyl tert-butyl ether	73		3.840					
38 1,1-Dichloroethane	63	4.208	4.208	0.0	70	39773	0.3092	
39 Vinyl acetate	86		4.243					
40 Isopropyl ether	87		4.279					
42 Tert-butyl ethyl ether	59		4.587					
45 2-Butanone (MEK)	43		4.706					9
43 cis-1,2-Dichloroethene	96	4.717	4.717	0.0	73	111535	1.81	
44 2,2-Dichloropropane	77		4.717					
49 Chlorobromomethane	128		4.919					
51 Chloroform	83		4.978					9
52 1,1,1-Trichloroethane	97		5.156					
54 1,1-Dichloropropene	75		5.299					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
55 Carbon tetrachloride	117		5.310					
58 Benzene	78	5.476	5.476	0.0	96	80304	0.2979	
57 1,2-Dichloroethane	62		5.476					
59 Tert-amyl methyl ether	73		5.559					
63 Trichloroethene	130	6.022	6.022	0.0	88	1094582	23.9	
65 1,2-Dichloropropane	63		6.212					
67 Dibromomethane	93		6.307					
69 Dichlorobromomethane	83		6.437					
71 2-Chloroethyl vinyl ether	63		6.686					
72 cis-1,3-Dichloropropene	75		6.828					
73 4-Methyl-2-pentanone (MIBK)	43		6.947					9
74 Toluene	91		7.137					9
75 trans-1,3-Dichloropropene	75		7.314					
78 1,3-Dichloropropane	76		7.635					
79 Tetrachloroethene	164		7.647					
80 2-Hexanone	43		7.694					
83 Chlorodibromomethane	129		7.848					
85 Ethylene Dibromide	107		7.967					
86 Chlorobenzene	112		8.429					
87 1,1,1,2-Tetrachloroethane	131		8.488					
88 Ethylbenzene	106		8.524					
89 m-Xylene & p-Xylene	106		8.631					
90 Styrene	104		9.010					
91 o-Xylene	106		9.010					
92 Bromoform	173		9.200					
93 Isopropylbenzene	105		9.354					
96 1,1,2,2-Tetrachloroethane	83		9.615					
97 Bromobenzene	156		9.662					
98 1,2,3-Trichloropropane	110		9.674					
100 N-Propylbenzene	120		9.757					
101 2-Chlorotoluene	126		9.840					
103 4-Chlorotoluene	126		9.947					
104 tert-Butylbenzene	119		10.244					
105 1,2,4-Trimethylbenzene	105		10.291					9
106 sec-Butylbenzene	105		10.457					9
107 1,3-Dichlorobenzene	146		10.576					9
108 4-Isopropyltoluene	119		10.599					
109 1,4-Dichlorobenzene	146		10.659					9
110 1,2,3-Trimethylbenzene	105		10.706					
111 n-Butylbenzene	91		11.002					
112 1,2-Dichlorobenzene	146		11.026					
113 1,2-Dibromo-3-Chloropropane	157		11.797					
115 1,2,4-Trichlorobenzene	180		12.639					
116 Hexachlorobutadiene	225		12.805					
117 Naphthalene	128		12.888					9
118 1,2,3-Trichlorobenzene	180		13.149					
S 123 Xylenes, Total	106		16.530					

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW--71B-040313	240-22783-2	29	33	55	50	26	61
MRC-MW--71A-040313	240-22783-3	42	43	63	54	35	56
MRC-MW12B-040313	240-22783-6	36	42	68	59	39	68
MRC-MW63A-040313	240-22783-7	49	51	66	56	46	58
MRC-MW70A-040313	240-22783-8	47	48	63	53	44	53
MRC-MW70B-040313	240-22783-9	45	44	64	52	41	43
	MB 240-81130/22-A	54	54	68	59	46	71
	LCS 240-81130/23-A	65	66	84	70	56	66

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A4HP7 Start Date: 03/26/2013 09:31

Analysis Batch Number: 79447 End Date: 03/26/2013 17:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-79447/1		03/26/2013 09:31	1	30326001.D	RXI-5SILMS 0.45(mm)
STD5 240-79447/2 IC		03/26/2013 09:55	1	30326002.D	RXI-5SILMS 0.45(mm)
STD4 240-79447/3 IC		03/26/2013 10:18	1	30326003.D	RXI-5SILMS 0.45(mm)
STD3 240-79447/4 IC		03/26/2013 10:42	1	30326004.D	RXI-5SILMS 0.45(mm)
STD2 240-79447/5 IC		03/26/2013 11:06	1	30326005.D	RXI-5SILMS 0.45(mm)
STD1 240-79447/6 IC		03/26/2013 11:30	1	30326006.D	RXI-5SILMS 0.45(mm)
STD9 240-79447/7 IC		03/26/2013 11:53	1	30326007.D	RXI-5SILMS 0.45(mm)
STD8 240-79447/8 IC		03/26/2013 12:17	1	30326008.D	RXI-5SILMS 0.45(mm)
STD7 240-79447/9 IC		03/26/2013 12:41	1	30326009.D	RXI-5SILMS 0.45(mm)
STD6 240-79447/10 ICIS		03/26/2013 13:05	1	30326010.D	RXI-5SILMS 0.45(mm)
ICV 240-79447/11		03/26/2013 13:29	1	30326011.D	RXI-5SILMS 0.45(mm)
STD9 240-79447/13 IC		03/26/2013 14:16	1		RXI-5SILMS 0.45(mm)
STD8 240-79447/14 IC		03/26/2013 14:40	1		RXI-5SILMS 0.45(mm)
STD7 240-79447/15 IC		03/26/2013 15:04	1		RXI-5SILMS 0.45(mm)
STD6 240-79447/16 IC		03/26/2013 15:28	1		RXI-5SILMS 0.45(mm)
STD5 240-79447/17 IC		03/26/2013 15:51	1		RXI-5SILMS 0.45(mm)
STD4 240-79447/18 IC		03/26/2013 16:15	1		RXI-5SILMS 0.45(mm)
STD3 240-79447/19 IC		03/26/2013 16:39	1		RXI-5SILMS 0.45(mm)
STD2 240-79447/20 IC		03/26/2013 17:03	1		RXI-5SILMS 0.45(mm)
ICV 240-79447/21		03/26/2013 17:27	1		RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: 30326001.D DFTPP Injection Date: 03/26/2013

Instrument ID: A4HP7 DFTPP Injection Time: 09:31

Analysis Batch No.: 79447

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.9	
68	Less than 2.0% of mass 69	0.6	(1.6)1
69	Mass 69 relative abundance	39.9	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	51.6	
197	Less than 1.0% of mass 198	0.7	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.2	
275	10.0- 30.0% of mass 198	22.8	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	10.0	
442	40.0 - 110.0% of mass 198	70.6	
443	15.0 - 24.0% of mass 442	13.1	(18.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-79447/2	30326002.D	03/26/2013	09:55
	STD4 240-79447/3	30326003.D	03/26/2013	10:18
	STD3 240-79447/4	30326004.D	03/26/2013	10:42
	STD2 240-79447/5	30326005.D	03/26/2013	11:06
	STD1 240-79447/6	30326006.D	03/26/2013	11:30
	STD9 240-79447/7	30326007.D	03/26/2013	11:53
	STD8 240-79447/8	30326008.D	03/26/2013	12:17
	STD7 240-79447/9	30326009.D	03/26/2013	12:41
	STD6 240-79447/10	30326010.D	03/26/2013	13:05
	ICV 240-79447/11	30326011.D	03/26/2013	13:29

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-79447/6	30326006.D
Level 2	STD2 240-79447/5	30326005.D
Level 3	STD3 240-79447/4	30326004.D
Level 4	STD4 240-79447/3	30326003.D
Level 5	STD5 240-79447/2	30326002.D
Level 6	STD6 240-79447/10	30326010.D
Level 7	STD7 240-79447/9	30326009.D
Level 8	STD8 240-79447/8	30326008.D
Level 9	STD9 240-79447/7	30326007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.6330	0.7628 0.6445	0.6326 0.6996	0.6763 0.6979	0.6299	Ave		0.6721				7.0		20.0			
N-Nitrosodimethylamine	0.8596	0.7099 0.8489	0.7797 0.9511	0.7779 0.9204	0.8064	Ave		0.8317				9.6		20.0			
Pyridine	1.6429	1.3434 1.5993	1.2809 1.7969	1.5945 1.7982	1.5677	Ave		1.5780				12.0		20.0			
Ethyl methacrylate	1.0641	0.9031 1.0261	0.9820 1.1677	1.0656 1.1357	1.0038	Ave		1.0435				8.1		20.0			
3-Chloropropionitrile	0.7527	0.5672 0.7586	0.6488 0.8441	0.8412 0.8108	0.7185	Ave		0.7427				13.0		20.0			
Malononitrile	1.4657	1.0265 1.4811	1.1938 1.6537	1.5627 1.5775	1.3555	Ave		1.4146				15.0		20.0			
Benzaldehyde	1.1721 1.0478	1.0766 0.9443	1.0972 0.9034	1.2299 +++++	1.0599	Ave		1.0664			0.0100	10.0		20.0			
Phenol	2.2241	1.9240 2.1775	2.1512 2.4174	2.3641 2.3484	2.1316	Ave		2.2173			0.8000	7.2		20.0			
Aniline	2.5046	2.2349 2.4622	2.3905 2.7463	2.7024 2.6917	2.3912	Ave		2.5155				7.2		20.0			
Bis(2-chloroethyl)ether	1.3947	1.2375 1.3858	1.4456 1.5148	1.5463 1.4915	1.3416	Ave		1.4197			0.7000	7.1		20.0			
2-Chlorophenol	1.6946	1.4745 1.6754	1.6929 1.8765	1.8791 1.8350	1.6284	Ave		1.7196			0.8000	8.1		20.0			
1,3-Dichlorobenzene	1.4694	1.4248 1.4325	1.4411 1.6157	1.5958 1.5673	1.4167	Ave		1.4954				5.6		20.0			
1,4-Dichlorobenzene	1.7960	1.7093 1.7700	1.8924 1.9872	1.9825 1.9405	1.7623	Ave		1.8550				5.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzyl alcohol	1.0851	0.8331 1.1005	0.9686 1.2093	1.1681 1.1808	1.0488	Ave		1.0743				12.0		20.0			
1,2-Dichlorobenzene	1.3772	1.3731 1.3823	1.3794 1.5242	1.5293 1.4970	1.3377	Ave		1.4250				5.5		20.0			
2-Methylphenol	1.5910	1.3004 1.5889	1.5912 1.7271	1.7062 1.6881	1.5061	Ave		1.5874			0.7000	8.7		20.0			
bis (2-chloroisopropyl) ether	1.4509	1.3571 1.4477	1.4889 1.5867	1.6492 1.5514	1.3704	Ave		1.4878				6.9		20.0			
3 & 4 Methylphenol	1.6445	1.3961 1.6417	1.5831 1.8084	1.8551 1.7857	1.5745	Ave		1.6611				9.1		20.0			
N-Nitrosodi-n-propylamine	0.9050	0.7751 0.8974	0.8776 0.9783	0.9954 0.9373	0.8843	Ave		0.9063			0.5000	7.5		20.0			
Acetophenone	1.8702	1.7321 1.8137	1.8330 2.0420	2.0288 2.0025	1.7940	Ave		1.8895			0.0100	6.3		20.0			
Hexachloroethane	0.5733	0.5045 0.5644	0.5215 0.6207	0.5864 0.6182	0.5216	Ave		0.5638			0.3000	7.9		20.0			
Nitrobenzene	0.3831	0.3232 0.3759	0.3373 0.4185	0.3908 0.4123	0.3549	Ave		0.3745			0.2000	9.1		20.0			
Isophorone	0.6276	0.5135 0.6323	0.5506 0.6859	0.6360 0.6892	0.5762	Ave		0.6139			0.4000	10.0		20.0			
2-Nitrophenol	0.2162	0.1266 0.2171	0.1472 0.2365	0.1879 0.2348	0.1831	Lin1	-0.075	0.2308			0.1000				0.9970		0.9900
1,3,5-Trichlorobenzene	0.3037	0.2940 0.3044	0.3051 0.3243	0.3433 0.3202	0.2937	Ave		0.3111				5.5		20.0			
2,4-Dimethylphenol	0.4349	0.3757 0.4292	0.4292 0.4593	0.4741 0.4522	0.4026	Ave		0.4321			0.2000	7.3		20.0			
Benzoic acid	0.2074	+++++ 0.2276	0.0437 0.2487	0.1027 0.2622	0.1509	Lin1	-0.563	0.2563							0.9910		0.9900
Bis(2-chloroethoxy)methane	0.4219	0.3698 0.4194	0.4238 0.4427	0.4612 0.4512	0.4052	Ave		0.4244			0.3000	6.8		20.0			
2,4-Dichlorophenol	0.3509	0.2681 0.3423	0.3248 0.3765	0.3598 0.3718	0.3186	Ave		0.3391			0.2000	10.0		20.0			
1,2,4-Trichlorobenzene	0.3112	0.2938 0.3096	0.3229 0.3385	0.3266 0.3304	0.2884	Ave		0.3152				5.6		20.0			
Naphthalene	1.0415 0.9491	0.9309 0.9590	0.9415 1.0337	1.0305 1.0312	0.8949	Ave		0.9792			0.7000	5.6		20.0			
4-Chloroaniline	0.4621	0.3988 0.4628	0.4234 0.4950	0.4699 0.4976	0.4305	Ave		0.4550			0.0100	7.7		20.0			
Hexachlorobutadiene	0.1667	0.1600 0.1642	0.1678 0.1760	0.1747 0.1746	0.1528	Ave		0.1671			0.0100	4.8		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2,3-Trichlorobenzene	0.2888	0.2801 0.2933	0.2874 0.3096	0.3064 0.3093	0.2715	Ave		0.2933				4.8		20.0			
Caprolactam	0.0924	+++++ 0.0894	0.0637 0.0890	0.0877 0.0847	0.0845	Ave		0.0845			0.0100	11.0		20.0			
4-Chloro-3-methylphenol	0.3673	0.2673 0.3751	0.3351 0.4016	0.3752 0.4039	0.3494	Ave		0.3594			0.2000	12.0		20.0			
2-Methylnaphthalene	0.6544 0.6047	0.5424 0.6027	0.6054 0.6457	0.6623 0.6510	0.5654	Ave		0.6149			0.4000	6.8		20.0			
1-Methylnaphthalene	0.6202 0.5870	0.5770 0.5791	0.5754 0.6302	0.6432 0.6285	0.5511	Ave		0.5991				5.3		20.0			
1,2,3,5-Tetrachlorobenzene	0.5007	0.4623 0.4926	0.5202 0.5361	0.5476 0.5265	0.4891	Ave		0.5094				5.5		20.0			
Hexachlorocyclopentadiene	0.2828	0.1808 0.2882	0.2037 0.3151	0.2534 0.3139	0.2504	Ave		0.2610			0.0500	19.0		20.0			
2,4,6-Trichlorophenol	0.4282	0.2786 0.4244	0.3498 0.4581	0.4279 0.4633	0.3836	Ave		0.4017			0.2000	15.0		20.0			
2,4,5-Trichlorophenol	0.4589	0.3461 0.4529	0.4039 0.4921	0.4759 0.4994	0.4204	Ave		0.4437			0.2000	12.0		20.0			
2,4-Toluene diamine	0.1140	0.1407 0.1254	0.1897 0.1341	0.1708 0.1410	0.1019	Lin	-0.049	0.1367							0.9900		0.9900
1,2,3,4 -Tetrachlorobenzene	0.4886	0.4668 0.4824	0.5025 0.5205	0.5406 0.5169	0.4770	Ave		0.4994				5.0		20.0			
1,1'-Biphenyl	1.3664 1.2092	1.1896 1.2221	1.2483 1.3017	1.3663 1.3025	1.1846	Ave		1.2656			0.0100	5.6		20.0			
2-Chloronaphthalene	1.1128 1.0780	1.0018 1.0785	1.0826 1.1604	1.1800 1.1641	1.0313	Ave		1.0988			0.8000	5.6		20.0			
2-Nitroaniline	0.3500	0.2022 0.3519	0.2448 0.3811	0.3153 0.3855	0.3063	Lin1	-0.118	0.3757			0.0100				0.9970		0.9900
Dimethyl phthalate	1.0965	0.9426 1.1223	1.0695 1.2281	1.2024 1.2204	1.0746	Ave		1.1196			0.0100	8.6		20.0			
2,6-Dinitrotoluene	0.2529	0.1410 0.2603	0.1808 0.2811	0.2055 0.2843	0.2263	Lin1	-0.097	0.2768							0.9970		0.9900
1,2-Dinitrobenzene	0.1239	0.0714 0.1334	0.0925 0.1449	0.1135 0.1425	0.1122	Lin1	-0.047	0.1400							0.9960		0.9900
Acenaphthylene	1.2591 1.6027	1.3125 1.6336	1.4446 1.7672	1.6642 1.7803	1.5076	Ave		1.5524			0.9000	12.0		20.0			
3-Nitroaniline	0.3255	0.1639 0.3324	0.2332 0.3644	0.3008 0.3596	0.2955	Lin1	-0.117	0.3548			0.0100				0.9970		0.9900
Acenaphthene	0.9705 0.9469	0.9360 0.9492	0.9645 1.0029	1.0511 1.0054	0.9461	Ave		0.9747			0.9000	3.9		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,4-Dinitrophenol	0.1426	+++++ 0.1526	+++++ 0.1648	0.0602 0.1706	0.0965	Lin1	-0.566	0.1763			0.0100				0.9950		0.9900
4-Nitrophenol	0.2248	+++++ 0.2285	0.1460 0.2477	0.1848 0.2523	0.1977	Ave		0.2117				18.0		20.0			
2,4-Dinitrotoluene	0.3463	0.1618 0.3546	0.2236 0.3850	0.3042 0.3896	0.3075	Lin1	-0.143	0.3799			0.2000				0.9970		0.9900
Dibenzofuran	1.5704 1.4271	1.3579 1.4457	1.4559 1.5492	1.5787 1.5620	1.3791	Ave		1.4807			0.8000	5.8		20.0			
2,3,5,6-Tetrachlorophenol	0.3686	0.1693 0.3822	0.2808 0.4058	0.3364 0.4035	0.3386	Lin1	-0.130	0.3999							0.9980		0.9900
Diethyl phthalate	1.0540	0.9351 1.0762	1.0209 1.1464	1.1338 1.1647	1.0307	Ave		1.0702			0.0100	7.2		20.0			
4-Chlorophenyl phenyl ether	0.5580	0.5213 0.5746	0.5767 0.6125	0.6172 0.6153	0.5462	Ave		0.5777			0.4000	6.1		20.0			
4-Nitroaniline	0.3212	0.1905 0.3231	0.2057 0.3555	0.2855 0.3497	0.2981	Lin1	-0.111	0.3460			0.0100				0.9980		0.9900
Fluorene	1.1636 1.1770	1.0674 1.1643	1.1710 1.2483	1.2788 1.2366	1.1467	Ave		1.1838			0.9000	5.3		20.0			
4,6-Dinitro-2-methylphenol	0.1397	+++++ 0.1510	0.0472 0.1655	0.0816 0.1657	0.0965	Lin1	-0.160	0.1657			0.0100				0.9920		0.9900
N-Nitrosodiphenylamine	0.5861	0.4720 0.6051	0.5462 0.6458	0.6269 0.6485	0.5612	Ave		0.5865			0.0100	10.0		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.7969	0.6367 0.8126	0.7342 0.8656	0.8472 0.8752	0.7604	Ave		0.7912				10.0		20.0			
Azobenzene	0.7969	0.6374 0.8126	0.7342 0.8656	0.8472 0.8752	0.7604	Ave		0.7912				10.0		20.0			
4-Bromophenyl phenyl ether	0.2025	0.1799 0.2106	0.2004 0.2256	0.2212 0.2232	0.1928	Ave		0.2070			0.1000	7.8		20.0			
Hexachlorobenzene	0.2758 0.2063	0.1814 0.2094	0.2051 0.2206	0.2214 0.2223	0.1937	Ave		0.2151			0.1000	12.0		20.0			
Atrazine	0.1364	0.0982 0.1372	0.1202 0.1391	0.1412 0.1294	0.1276	Ave		0.1287			0.0100	11.0		20.0			
Pentachlorophenol	0.1577	0.0729 0.1684	0.1048 0.1801	0.1259 0.1800	0.1445	Lin1	-0.142	0.1769			0.0500				0.9970		0.9900
Phenanthrene	1.1248 1.0132	1.0145 1.0485	1.0871 1.1173	1.1095 1.1350	0.9810	Ave		1.0701			0.7000	5.3		20.0			
Anthracene	0.7863 1.0474	0.8283 1.0706	0.9438 1.1518	1.0744 1.1538	0.9803	Ave		1.0041			0.7000	13.0		20.0			
Carbazole	0.9880	0.8683 1.0206	0.9580 1.1036	1.0351 1.0919	0.9404	Ave		1.0007			0.0100	7.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Di-n-butyl phthalate	1.1133	1.0236 1.1663	1.0479 1.2704	1.1887 1.2610	1.0954	Ave		1.1458			0.0100	8.0		20.0			
Fluoranthene	1.0391 1.1386	0.9481 1.1832	1.0585 1.2698	1.1680 1.2825	1.0896	Ave		1.1308			0.6000	9.6		20.0			
Benzidine	0.5290	0.1940 0.5598	0.2836 0.5884	0.3942 0.5861	0.4266	Lin1	-0.274	0.5810							0.9960		0.9900
Pyrene	0.9901 1.0741	0.9225 1.0970	1.0259 1.1714	1.1304 1.1823	1.0392	Ave		1.0703			0.6000	8.0		20.0			
Butyl benzyl phthalate	0.4177	0.2175 0.4287	0.2768 0.4715	0.3688 0.4717	0.3857	Lin1	-0.164	0.4611			0.0100				0.9970		0.9900
3,3'-Dimethoxybenzidine	0.2344	+++++ 0.2516	0.0853 0.2827	0.1244 0.2819	0.1581	Lin1	-0.280	0.2808							0.9900		0.9900
3,3'-Dichlorobenzidine	0.4258	0.2420 0.4361	0.3105 0.4629	0.3897 0.4605	0.3808	Ave		0.3885			0.0100	20.0		20.0			
4,4'-Methylene bis(2-chloroaniline)	0.1954	0.1055 0.1986	0.1293 0.2159	0.1787 0.2113	0.1775	Lin1	-0.068	0.2103							0.9980		0.9900
Bis(2-ethylhexyl) phthalate	0.5914	0.3029 0.6160	0.3952 0.6675	0.5283 0.6671	0.5580	Lin1	-0.231	0.6551			0.0100				0.9970		0.9900
Benzo[a]anthracene	0.9020 0.9703	0.8054 1.0009	0.8997 1.0748	1.0092 1.0777	0.9369	Ave		0.9641			0.8000	9.2		20.0			
Chrysene	0.9672 0.8833	0.8130 0.9047	0.8934 0.9559	0.9436 0.9517	0.8401	Ave		0.9059			0.7000	6.0		20.0			
Di-n-octyl phthalate	1.0906	+++++ 1.1838	0.5417 1.3197	0.8467 1.3643	1.0018	Lin1	-0.981	1.3241			0.0100				0.9940		0.9900
Benzo[b]fluoranthene	0.9494 1.1500	0.9382 1.1653	0.9969 1.2865	1.2193 1.3297	1.0956	Ave		1.1256			0.7000	13.0		20.0			
Benzo[k]fluoranthene	1.0656 1.1999	1.0075 1.2818	1.1485 1.3454	1.2400 1.3536	1.1526	Ave		1.1994			0.7000	9.9		20.0			
Benzo[a]pyrene	0.5219 1.1034	0.7615 1.1541	0.8946 1.2564	1.0675 1.2915	1.0501	Lin1	-0.133	1.2172			0.7000				0.9950		0.9900
Indeno[1,2,3-cd]pyrene	0.9939 1.1722	0.8686 1.2071	1.0038 1.3181	1.2130 1.3328	1.1231	Ave		1.1370			0.5000	14.0		20.0			
Dibenz(a,h)anthracene	0.8261 0.9660	0.7252 0.9906	0.8214 1.0770	0.9965 1.0957	0.9226	Ave		0.9357			0.4000	13.0		20.0			
Benzo[g,h,i]perylene	0.8968 0.9753	0.8553 1.0112	0.9150 1.0807	1.0250 1.1036	0.9263	Ave		0.9766			0.5000	8.7		20.0			
2-Fluorophenol (Surr)	1.5666	1.4081 1.5692	1.4752 1.7616	1.7073 1.7061	1.5086	Ave		1.5878				7.9		20.0			
Phenol-d5 (Surr)	2.0872	1.7917 2.0846	2.0235 2.3066	2.2399 2.2565	2.0183	Ave		2.1010				7.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Nitrobenzene-d5 (Surr)	0.3383 0.3682	0.2852 0.3764	0.3241 0.4007	0.3738 0.4015	0.3415	Ave		0.3566				11.0		20.0			
2-Fluorobiphenyl (Surr)	1.3060 1.2123	1.1896 1.2108	1.2445 1.3012	1.3099 1.3146	1.1628	Ave		1.2502				4.7		20.0			
2,4,6-Tribromophenol (Surr)	 0.1935	0.0988 0.1993	0.1366 0.2112	0.1839 0.2184	0.1802	Lin1	-0.069	0.2116							0.9980		0.9900
Terphenyl-d14 (Surr)	0.6894 0.6465	0.5965 0.6713	0.6521 0.7103	0.6914 0.7047	0.6250	Ave		0.6653				5.8		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-79447/6	30326006.D
Level 2	STD2 240-79447/5	30326005.D
Level 3	STD3 240-79447/4	30326004.D
Level 4	STD4 240-79447/3	30326003.D
Level 5	STD5 240-79447/2	30326002.D
Level 6	STD6 240-79447/10	30326010.D
Level 7	STD7 240-79447/9	30326009.D
Level 8	STD8 240-79447/8	30326008.D
Level 9	STD9 240-79447/7	30326007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	420122	23407 609271	36827 812988	77161 1025483	175291	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	570504	21784 802499	45391 1105285	88758 1352528	224396	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	1090395	41224 1511978	74575 2088089	181927 2642441	436263	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Ethyl methacrylate	DCB	Ave	706236	27715 970035	57169 1356979	121581 1668830	279337	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3-Chloropropionitrile	DCB	Ave	499541	17407 717146	37773 980890	95983 1191423	199938	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Ave	972810	31499 1400206	69504 1921737	178303 2318023	377208	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	6626 695440	33038 892752	63879 1049842	140327 +++++	294959	0.100 10.0	0.500 15.0	1.00 20.0	2.00 +++++	5.00
Phenol	DCB	Ave	1476159	59043 2058575	125239 2809221	269737 3450828	593175	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1662335	68584 2327767	139172 3191428	308335 3955352	665435	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	925694	37974 1310152	84164 1760270	176434 2191721	373342	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	1124712	45248 1583922	98562 2180665	214405 2696449	453165	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	975264	43722 1354279	83901 1877531	182081 2303096	394229	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCB	Ave	1192018	52455 1673338	110176 2309298	226202 2851461	490425	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzyl alcohol	DCB	Ave	720165	25565 1040379	56392 1405316	133277 1735148	291870	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2-Dichlorobenzene	DCB	Ave		42135	80310	174496	372265		0.500	1.00	2.00	5.00
			914086	1306787	1771234	2199824		10.0	15.0	20.0	25.0	
2-Methylphenol	DCB	Ave		39906	92640	194676	419119		0.500	1.00	2.00	5.00
			1055964	1502160	2006976	2480635		10.0	15.0	20.0	25.0	
bis (2-chloroisopropyl) ether	DCB	Ave		41645	86681	188170	381361		0.500	1.00	2.00	5.00
			962987	1368664	1843818	2279797		10.0	15.0	20.0	25.0	
3 & 4 Methylphenol	DCB	Ave		42843	92168	211669	438147		0.500	1.00	2.00	5.00
			1091443	1552017	2101430	2624076		10.0	15.0	20.0	25.0	
N-Nitrosodi-n-propylamine	DCB	Ave		23786	51095	113569	246099		0.500	1.00	2.00	5.00
			600670	848436	1136879	1377355		10.0	15.0	20.0	25.0	
Acetophenone	DCB	Ave		53153	106715	231481	499245		0.500	1.00	2.00	5.00
			1241282	1714679	2372922	2942587		10.0	15.0	20.0	25.0	
Hexachloroethane	DCB	Ave		15481	30360	66905	145159		0.500	1.00	2.00	5.00
			380489	533536	721295	908365		10.0	15.0	20.0	25.0	
Nitrobenzene	NPT	Ave		38599	77754	177885	390254		0.500	1.00	2.00	5.00
			995913	1388013	1936346	2376630		10.0	15.0	20.0	25.0	
Isophorone	NPT	Ave		61335	126917	289474	633525		0.500	1.00	2.00	5.00
			1631728	2334482	3174030	3972850		10.0	15.0	20.0	25.0	
2-Nitrophenol	NPT	Lin1		15126	33937	85528	201326		0.500	1.00	2.00	5.00
			562114	801642	1094299	1353463		10.0	15.0	20.0	25.0	
1,3,5-Trichlorobenzene	NPT	Ave		35120	70332	156259	322928		0.500	1.00	2.00	5.00
			789636	1124000	1500763	1845603		10.0	15.0	20.0	25.0	
2,4-Dimethylphenol	NPT	Ave		44870	98916	215812	442644		0.500	1.00	2.00	5.00
			1130626	1584480	2125189	2606996		10.0	15.0	20.0	25.0	
Benzoic acid	NPT	Lin1		+++++	20122	93469	331850		+++++	2.00	4.00	10.0
			1078161	1680861	2301997	3022835		20.0	30.0	40.0	50.0	
Bis(2-chloroethoxy)methane	NPT	Ave		44165	97678	209910	445478		0.500	1.00	2.00	5.00
			1096909	1548356	2048320	2601095		10.0	15.0	20.0	25.0	
2,4-Dichlorophenol	NPT	Ave		32019	74862	163752	350330		0.500	1.00	2.00	5.00
			912308	1263688	1742038	2143316		10.0	15.0	20.0	25.0	
1,2,4-Trichlorobenzene	NPT	Ave		35095	74414	148648	317142		0.500	1.00	2.00	5.00
			808990	1142932	1566115	1904650		10.0	15.0	20.0	25.0	
Naphthalene	NPT	Ave	23248	111184	217009	469037	983982	0.100	0.500	1.00	2.00	5.00
			2467428	3540834	4783268	5944609		10.0	15.0	20.0	25.0	
4-Chloroaniline	NPT	Ave		47629	97600	213873	473280		0.500	1.00	2.00	5.00
			1201285	1708794	2290659	2868698		10.0	15.0	20.0	25.0	
Hexachlorobutadiene	NPT	Ave		19107	38679	79508	167968		0.500	1.00	2.00	5.00
			433361	606172	814445	1006350		10.0	15.0	20.0	25.0	
1,2,3-Trichlorobenzene	NPT	Ave		33452	66243	139463	298551		0.500	1.00	2.00	5.00
			750760	1082729	1432773	1782769		10.0	15.0	20.0	25.0	
Caprolactam	NPT	Ave		+++++	14688	39905	92945		+++++	1.00	2.00	5.00
			240111	330237	412040	487986		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Chloro-3-methylphenol	NPT	Ave		31924	77246	170804	384172		0.500	1.00	2.00	5.00
			954944	1384704	1858379	2328594		10.0	15.0	20.0	25.0	
2-Methylnaphthalene	NPT	Ave	14606	64788	139527	301470	621660	0.100	0.500	1.00	2.00	5.00
			1572040	2225086	2987581	3752455		10.0	15.0	20.0	25.0	
1-Methylnaphthalene	NPT	Ave	13844	68917	132614	292773	605948	0.100	0.500	1.00	2.00	5.00
			1526189	2138096	2916102	3623000		10.0	15.0	20.0	25.0	
1,2,3,5-Tetrachlorobenzene	ANT	Ave		32391	69397	144535	310286		0.500	1.00	2.00	5.00
			761135	1071060	1464958	1788952		10.0	15.0	20.0	25.0	
Hexachlorocyclopentadiene	ANT	Ave		12669	27176	66896	158855		0.500	1.00	2.00	5.00
			429847	626565	861001	1066624		10.0	15.0	20.0	25.0	
2,4,6-Trichlorophenol	ANT	Ave		19518	46661	112954	243352		0.500	1.00	2.00	5.00
			650890	922597	1251922	1573978		10.0	15.0	20.0	25.0	
2,4,5-Trichlorophenol	ANT	Ave		24247	53888	125615	266711		0.500	1.00	2.00	5.00
			697628	984580	1344691	1696883		10.0	15.0	20.0	25.0	
2,4-Toluene diamine	NPT	Lin		16802	43715	77759	112008		0.500	1.00	2.00	5.00
			296411	462880	620565	813092		10.0	15.0	20.0	25.0	
1,2,3,4 -Tetrachlorobenzene	ANT	Ave		32706	67041	142705	302630		0.500	1.00	2.00	5.00
			742696	1048856	1422440	1756180		10.0	15.0	20.0	25.0	
1,1'-Biphenyl	ANT	Ave	17227	83349	166539	360635	751588	0.100	0.500	1.00	2.00	5.00
			1838102	2656934	3556973	4425529		10.0	15.0	20.0	25.0	
2-Chloronaphthalene	ANT	Ave	14030	70187	144431	311456	654317	0.100	0.500	1.00	2.00	5.00
			1638715	2344810	3170980	3955274		10.0	15.0	20.0	25.0	
2-Nitroaniline	ANT	Lin1		14164	32660	83232	194347		0.500	1.00	2.00	5.00
			532110	765126	1041411	1309734		10.0	15.0	20.0	25.0	
Dimethyl phthalate	ANT	Ave		66037	142683	317373	681802		0.500	1.00	2.00	5.00
			1666867	2439906	3355999	4146465		10.0	15.0	20.0	25.0	
2,6-Dinitrotoluene	ANT	Lin1		9877	24119	54230	143554		0.500	1.00	2.00	5.00
			384404	565942	768234	965893		10.0	15.0	20.0	25.0	
1,2-Dinitrobenzene	ANT	Lin1		5001	12340	29949	71186		0.500	1.00	2.00	5.00
			188370	289965	396083	484090		10.0	15.0	20.0	25.0	
Acenaphthylene	ANT	Ave	15874	91954	192722	439256	956467	0.100	0.500	1.00	2.00	5.00
			2436333	3551614	4829028	6048801		10.0	15.0	20.0	25.0	
3-Nitroaniline	ANT	Lin1		11481	31106	79408	187468		0.500	1.00	2.00	5.00
			494851	722700	995870	1221769		10.0	15.0	20.0	25.0	
Acenaphthene	ANT	Ave	12236	65578	128675	277426	600263	0.100	0.500	1.00	2.00	5.00
			1439434	2063719	2740413	3416017		10.0	15.0	20.0	25.0	
2,4-Dinitrophenol	ANT	Lin1		+++++	+++++	31802	122402		+++++	+++++	4.00	10.0
			433425	663498	900840	1159074		20.0	30.0	40.0	50.0	
4-Nitrophenol	ANT	Ave		+++++	19475	48766	125414		+++++	1.00	2.00	5.00
			341752	496792	676834	857104		10.0	15.0	20.0	25.0	
2,4-Dinitrotoluene	ANT	Lin1		11336	29834	80286	195107		0.500	1.00	2.00	5.00
			526384	770957	1052134	1323846		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Dibenzofuran	ANT	Ave	19799 2169395	95137 3143157	194227 4233295	416696 5306911	874981	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,3,5,6-Tetrachlorophenol	ANT	Lin1	 560387	11858 830901	37463 1108975	88788 1370811	214800	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Diethyl phthalate	ANT	Ave	 1602197	65513 2339721	136196 3132662	299274 3957326	653925	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chlorophenyl phenyl ether	ANT	Ave	 848242	36523 1249315	76940 1673826	162909 2090559	346563	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Nitroaniline	ANT	Lin1	 488242	13349 702472	27436 971298	75359 1188225	189097	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluorene	ANT	Ave	14670 1789234	74781 2531431	156219 3411173	337549 4201488	727496	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4,6-Dinitro-2-methylphenol	PHN	Lin1	 338424	+++++ 517434	9817 716033	34328 891673	98836	 10.0	+++++ 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodiphenylamine	PHN	Ave	 1419987	52408 2073080	113712 2793486	263876 3489863	574983	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	 1930662	70699 2784315	152850 3744096	356569 4710267	779062	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Azobenzene	PHN	Ave	 1930662	70776 2784315	152850 3744096	356569 4710267	779062	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Bromophenyl phenyl ether	PHN	Ave	 490578	19981 721422	41720 976059	93120 1200984	197505	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobenzene	PHN	Ave	5540 499897	20144 717490	42695 954287	93169 1196313	198445	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Atrazine	PHN	Ave	 330377	10909 470189	25026 601659	59435 696323	130707	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pentachlorophenol	PHN	Lin1	 764114	16182 1153973	43647 1558037	105951 1937678	296110	 20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Phenanthrene	PHN	Ave	22598 2454518	112650 3592541	226309 4832869	467013 6108372	1005160	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Anthracene	PHN	Ave	15798 2537397	91971 3668301	196477 4982079	452219 6209443	1004362	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Carbazole	PHN	Ave	 2393500	96410 3496931	199426 4773650	435677 5876009	963476	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-butyl phthalate	PHN	Ave	 2697028	113654 3996191	218142 5495379	500324 6786140	1122340	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluoranthene	PHN	Ave	20877 2758426	105270 4053796	220359 5492589	491610 6901778	1116427	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzidine	CRY	Lin1	 1453880	23367 2181137	66007 2925689	187472 3656982	486326	 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyrene	CRY	Ave	21286 2952020	111101 4274201	238740 5824508	537589 7376722	1184856	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Butyl benzyl phthalate	CRY	Lin1		26196	64414	175400	439794		0.500	1.00	2.00	5.00
			1148070	1670244	2344618	2943091		10.0	15.0	20.0	25.0	
3,3'-Dimethoxybenzidine	CRY	Lin1		+++++	19842	59170	180302		+++++	1.00	2.00	5.00
			644291	980453	1405745	1758714		10.0	15.0	20.0	25.0	
3,3'-Dichlorobenzidine	CRY	Ave		29140	72252	185338	434211		0.500	1.00	2.00	5.00
			1170164	1699140	2301749	2873193		10.0	15.0	20.0	25.0	
4,4'-Methylene bis(2-chloroaniline)	CRY	Lin1		12704	30094	84964	202318		0.500	1.00	2.00	5.00
			536889	773696	1073349	1318451		10.0	15.0	20.0	25.0	
Bis(2-ethylhexyl) phthalate	CRY	Lin1		36483	91978	251255	636213		0.500	1.00	2.00	5.00
			1625244	2400113	3318999	4162273		10.0	15.0	20.0	25.0	
Benzo[a]anthracene	CRY	Ave	19392	96994	209380	479938	1068170	0.100	0.500	1.00	2.00	5.00
			2666598	3899652	5344271	6724075		10.0	15.0	20.0	25.0	
Chrysene	CRY	Ave	20795	97913	207916	448733	957809	0.100	0.500	1.00	2.00	5.00
			2427682	3525022	4752804	5937855		10.0	15.0	20.0	25.0	
Di-n-octyl phthalate	PRY	Lin1		+++++	102348	323955	944629		+++++	1.00	2.00	5.00
			2488951	3846324	5433207	6940428		10.0	15.0	20.0	25.0	
Benzo[b]fluoranthene	PRY	Ave	16792	90721	188361	466521	1032987	0.100	0.500	1.00	2.00	5.00
			2624632	3786238	5296452	6763986		10.0	15.0	20.0	25.0	
Benzo[k]fluoranthene	PRY	Ave	18847	97415	217006	474465	1086750	0.100	0.500	1.00	2.00	5.00
			2738407	4164952	5538890	6885986		10.0	15.0	20.0	25.0	
Benzo[a]pyrene	PRY	Lin1	9232	73637	169031	408458	990110	0.100	0.500	1.00	2.00	5.00
			2518111	3749884	5172766	6569717		10.0	15.0	20.0	25.0	
Indeno[1,2,3-cd]pyrene	PRY	Ave	17580	83988	189677	464115	1058943	0.100	0.500	1.00	2.00	5.00
			2675286	3922218	5426465	6780021		10.0	15.0	20.0	25.0	
Dibenz(a,h)anthracene	PRY	Ave	14612	70122	155208	381276	869919	0.100	0.500	1.00	2.00	5.00
			2204679	3218513	4434051	5574031		10.0	15.0	20.0	25.0	
Benzo[g,h,i]perylene	PRY	Ave	15863	82707	172894	392176	873393	0.100	0.500	1.00	2.00	5.00
			2225735	3285630	4449370	5613886		10.0	15.0	20.0	25.0	
2-Fluorophenol (Surr)	DCB	Ave		43211	85886	194803	419804		0.500	1.00	2.00	5.00
			1039757	1483458	2047130	2507104		10.0	15.0	20.0	25.0	
Phenol-d5 (Surr)	DCB	Ave		54982	117808	255567	561669		0.500	1.00	2.00	5.00
			1385274	1970716	2680473	3315929		10.0	15.0	20.0	25.0	
Nitrobenzene-d5 (Surr)	NPT	Ave	7552	34065	74698	170163	375505	0.100	0.500	1.00	2.00	5.00
			957271	1389517	1854040	2314248		10.0	15.0	20.0	25.0	
2-Fluorobiphenyl (Surr)	ANT	Ave	16465	83345	166030	345738	737748	0.100	0.500	1.00	2.00	5.00
			1842894	2632436	3555754	4466491		10.0	15.0	20.0	25.0	
2,4,6-Tribromophenol (Surr)	ANT	Lin1		6925	18218	48551	114313		0.500	1.00	2.00	5.00
			294115	433359	577145	742165		10.0	15.0	20.0	25.0	
Terphenyl-d14 (Surr)	CRY	Ave	14821	71844	151757	328823	712539	0.100	0.500	1.00	2.00	5.00
			1776880	2615522	3531872	4396791		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 79447

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/26/2013 09:55 Calibration End Date: 03/26/2013 13:05 Calibration ID: 14264

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-79447/11 Calibration Date: 03/26/2013 13:29

Instrument ID: A4HP7 Calib Start Date: 03/26/2013 09:55

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/26/2013 13:05

Lab File ID: 30326011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6721	0.6275		9.34	10.0	-6.6	30.0
N-Nitrosodimethylamine	Ave	0.8317	0.8725		10.5	10.0	4.9	30.0
Pyridine	Ave	1.578	1.630		10.3	10.0	3.3	30.0
Ethyl methacrylate	Ave	1.044	1.032		9.89	10.0	-1.1	30.0
3-Chloropropionitrile	Ave	0.7427	0.7608		10.2	10.0	2.4	30.0
Malononitrile	Ave	1.415	1.481		10.5	10.0	4.7	30.0
Benzaldehyde	Ave	1.066	1.052	0.0100	9.87	10.0	-1.3	30.0
Phenol	Ave	2.217	2.182	0.8000	9.84	10.0	-1.6	30.0
Aniline	Ave	2.515	2.494		9.91	10.0	-0.9	30.0
Bis(2-chloroethyl)ether	Ave	1.420	1.375	0.7000	9.69	10.0	-3.1	30.0
2-Chlorophenol	Ave	1.720	1.720	0.8000	10.0	10.0	0.0	30.0
1,3-Dichlorobenzene	Ave	1.495	1.473		9.85	10.0	-1.5	30.0
1,4-Dichlorobenzene	Ave	1.855	1.793		9.67	10.0	-3.3	30.0
Benzyl alcohol	Ave	1.074	1.116		10.4	10.0	3.9	30.0
1,2-Dichlorobenzene	Ave	1.425	1.398		9.81	10.0	-1.9	30.0
2-Methylphenol	Ave	1.587	1.602	0.7000	10.1	10.0	0.9	30.0
bis (2-chloroisopropyl) ether	Ave	1.488	1.447		9.73	10.0	-2.7	30.0
3 & 4 Methylphenol	Ave	1.661	1.655		9.96	10.0	-0.4	30.0
N-Nitrosodi-n-propylamine	Ave	0.9063	0.9257	0.5000	10.2	10.0	2.1	30.0
Acetophenone	Ave	1.890	1.894	0.0100	10.0	10.0	0.2	30.0
Hexachloroethane	Ave	0.5638	0.5766	0.3000	10.2	10.0	2.3	30.0
Nitrobenzene	Ave	0.3745	0.3822	0.2000	10.2	10.0	2.1	30.0
Isophorone	Ave	0.6139	0.6393	0.4000	10.4	10.0	4.1	30.0
2-Nitrophenol	Lin1		0.2152	0.1000	9.65	10.0	-3.5	30.0
1,3,5-Trichlorobenzene	Ave	0.3111	0.3045		9.79	10.0	-2.1	30.0
2,4-Dimethylphenol	Ave	0.4321	0.4299	0.2000	9.95	10.0	-0.5	30.0
Benzoic acid	Lin1		0.2145		18.9	20.0	-5.3	30.0
Bis(2-chloroethoxy)methane	Ave	0.4244	0.4181	0.3000	9.85	10.0	-1.5	30.0
2,4-Dichlorophenol	Ave	0.3391	0.3492	0.2000	10.3	10.0	3.0	30.0
1,2,4-Trichlorobenzene	Ave	0.3152	0.3019		9.58	10.0	-4.2	30.0
Naphthalene	Ave	0.9792	0.9431	0.7000	9.63	10.0	-3.7	30.0
4-Chloroaniline	Ave	0.4550	0.4554	0.0100	10.0	10.0	0.0	30.0
Hexachlorobutadiene	Ave	0.1671	0.1638	0.0100	9.80	10.0	-2.0	30.0
1,2,3-Trichlorobenzene	Ave	0.2933	0.2912		9.93	10.0	-0.7	30.0
Caprolactam	Ave	0.0845	0.0952	0.0100	11.3	10.0	12.6	30.0
4-Chloro-3-methylphenol	Ave	0.3594	0.3748	0.2000	10.4	10.0	4.3	30.0
2-Methylnaphthalene	Ave	0.6149	0.6009	0.4000	9.77	10.0	-2.3	30.0
1-Methylnaphthalene	Ave	0.5991	0.5830		9.73	10.0	-2.7	30.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5094	0.4891		9.60	10.0	-4.0	30.0
Hexachlorocyclopentadiene	Ave	0.2610	0.2669	0.0500	10.2	10.0	2.2	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-79447/11 Calibration Date: 03/26/2013 13:29

Instrument ID: A4HP7 Calib Start Date: 03/26/2013 09:55

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/26/2013 13:05

Lab File ID: 30326011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4,6-Trichlorophenol	Ave	0.4017	0.4083	0.2000	10.2	10.0	1.6	30.0
2,4,5-Trichlorophenol	Ave	0.4437	0.4540	0.2000	10.2	10.0	2.3	30.0
2,4-Toluene diamine	Lin		0.1237		9.40	10.0	-6.0	30.0
1,2,3,4 -Tetrachlorobenzene	Ave	0.4994	0.4737		9.49	10.0	-5.1	30.0
1,1'-Biphenyl	Ave	1.266	1.194	0.0100	9.43	10.0	-5.7	30.0
2-Chloronaphthalene	Ave	1.099	1.040	0.8000	9.47	10.0	-5.3	30.0
2-Nitroaniline	Lin1		0.3450	0.0100	9.50	10.0	-5.0	30.0
Dimethyl phthalate	Ave	1.120	1.106	0.0100	9.88	10.0	-1.2	30.0
2,6-Dinitrotoluene	Lin1		0.2526		9.47	10.0	-5.3	30.0
1,2-Dinitrobenzene	Lin1		0.1255		9.30	10.0	-7.0	30.0
Acenaphthylene	Ave	1.552	1.595	0.9000	10.3	10.0	2.8	30.0
3-Nitroaniline	Lin1		0.3241	0.0100	9.47	10.0	-5.3	30.0
2,4-Dinitrophenol	Lin1		0.1385	0.0100	18.9	20.0	-5.4	30.0
Acenaphthene	Ave	0.9747	0.9304	0.9000	9.54	10.0	-4.6	30.0
4-Nitrophenol	Ave	0.2117	0.2243		10.6	10.0	6.0	30.0
2,4-Dinitrotoluene	Lin1		0.3484	0.2000	9.55	10.0	-4.5	30.0
Dibenzofuran	Ave	1.481	1.409	0.8000	9.52	10.0	-4.8	30.0
2,3,5,6-Tetrachlorophenol	Lin1		0.3633		9.41	10.0	-5.9	30.0
Diethyl phthalate	Ave	1.070	1.050	0.0100	9.82	10.0	-1.8	30.0
4-Chlorophenyl phenyl ether	Ave	0.5777	0.5623	0.4000	9.73	10.0	-2.7	30.0
4-Nitroaniline	Lin1		0.3261	0.0100	9.75	10.0	-2.5	30.0
Fluorene	Ave	1.184	1.150	0.9000	9.71	10.0	-2.9	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.1429	0.0100	9.58	10.0	-4.2	30.0
N-Nitrosodiphenylamine	Ave	0.5865	0.5980	0.0100	10.2	10.0	2.0	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.7912	0.7970		10.1	10.0	0.7	30.0
Azobenzene	Ave	0.7912	0.7970		10.1	10.0	0.7	30.0
4-Bromophenyl phenyl ether	Ave	0.2070	0.2052	0.1000	9.91	10.0	-0.9	30.0
Hexachlorobenzene	Ave	0.2151	0.2022	0.1000	9.40	10.0	-6.0	30.0
Atrazine	Ave	0.1287	0.1342	0.0100	10.4	10.0	4.3	30.0
Pentachlorophenol	Lin1		0.1605	0.0500	18.9	20.0	-5.3	30.0
Phenanthrene	Ave	1.070	1.023	0.7000	9.56	10.0	-4.4	30.0
Anthracene	Ave	1.004	1.047	0.7000	10.4	10.0	4.3	30.0
Carbazole	Ave	1.001	0.9899	0.0100	9.89	10.0	-1.1	30.0
Di-n-butyl phthalate	Ave	1.146	1.136	0.0100	9.92	10.0	-0.8	30.0
Fluoranthene	Ave	1.131	1.147	0.6000	10.1	10.0	1.4	30.0
Benzidine	Lin1		0.5206		9.43	10.0	-5.7	30.0
Pyrene	Ave	1.070	1.055	0.6000	9.86	10.0	-1.4	30.0
Butyl benzyl phthalate	Lin1		0.4142	0.0100	9.34	10.0	-6.6	30.0
3,3'-Dimethoxybenzidine	Lin1		0.2281		9.12	10.0	-8.8	30.0
3,3'-Dichlorobenzidine	Ave	0.3885	0.4234	0.0100	10.9	10.0	9.0	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-79447/11 Calibration Date: 03/26/2013 13:29

Instrument ID: A4HP7 Calib Start Date: 03/26/2013 09:55

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/26/2013 13:05

Lab File ID: 30326011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.1948		9.59	10.0	-4.1	30.0
Bis(2-ethylhexyl) phthalate	Lin1		0.5923	0.0100	9.39	10.0	-6.1	30.0
Benzo[a]anthracene	Ave	0.9641	0.9768	0.8000	10.1	10.0	1.3	30.0
Chrysene	Ave	0.9059	0.8705	0.7000	9.61	10.0	-3.9	30.0
Di-n-octyl phthalate	Lin1		1.124	0.0100	9.23	10.0	-7.7	30.0
Benzo[b]fluoranthene	Ave	1.126	1.160	0.7000	10.3	10.0	3.0	30.0
Benzo[k]fluoranthene	Ave	1.199	1.220	0.7000	10.2	10.0	1.7	30.0
Benzo[a]pyrene	Lin1		1.121	0.7000	9.32	10.0	-6.8	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.137	1.182	0.5000	10.4	10.0	4.0	30.0
Dibenz(a,h)anthracene	Ave	0.9357	0.9749	0.4000	10.4	10.0	4.2	30.0
Benzo[g,h,i]perylene	Ave	0.9766	0.995	0.5000	10.2	10.0	1.9	30.0
2-Fluorophenol (Surr)	Ave	1.588	1.592		10.0	10.0	0.3	30.0
Phenol-d5 (Surr)	Ave	2.101	2.123		10.1	10.0	1.0	30.0
Nitrobenzene-d5 (Surr)	Ave	0.3566	0.3649		10.2	10.0	2.3	30.0
2-Fluorobiphenyl (Surr)	Ave	1.250	1.181		9.44	10.0	-5.6	30.0
2,4,6-Tribromophenol (Surr)	Lin1		0.1927		9.43	10.0	-5.7	30.0
Terphenyl-d14 (Surr)	Ave	0.6653	0.6368		9.57	10.0	-4.3	30.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: A4HP7 Start Date: 04/12/2013 10:21

Analysis Batch Number: 81679 End Date: 04/12/2013 19:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-81679/1		04/12/2013 10:21	1	30412001.D	RXI-5SILMS 0.45(mm)
CCV 240-81679/2 CCVIS		04/12/2013 10:42	1	30412002.D	RXI-5SILMS 0.45(mm)
MB 240-81130/22-A		04/12/2013 11:10	1	30412003.D	RXI-5SILMS 0.45(mm)
LCS 240-81130/23-A		04/12/2013 11:34	1	30412004.D	RXI-5SILMS 0.45(mm)
240-22783-6	MRC-MW12B-040313	04/12/2013 17:15	1	30412018.D	RXI-5SILMS 0.45(mm)
240-22783-7	MRC-MW63A-040313	04/12/2013 17:40	1	30412019.D	RXI-5SILMS 0.45(mm)
240-22783-8	MRC-MW70A-040313	04/12/2013 18:04	1	30412020.D	RXI-5SILMS 0.45(mm)
240-22783-9	MRC-MW70B-040313	04/12/2013 18:28	1	30412021.D	RXI-5SILMS 0.45(mm)
240-22783-3	MRC-MW--71A-040313	04/12/2013 18:52	1	30412022.D	RXI-5SILMS 0.45(mm)
240-22783-2	MRC-MW--71B-040313	04/12/2013 19:16	1	30412023.D	RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: 30412001.D DFTPP Injection Date: 04/12/2013

Instrument ID: A4HP7 DFTPP Injection Time: 10:21

Analysis Batch No.: 81679

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	39.1	
68	Less than 2.0% of mass 69	0.6	(1.4)1
69	Mass 69 relative abundance	40.0	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	49.1	
197	Less than 1.0% of mass 198	0.6	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.5	
275	10.0- 30.0% of mass 198	22.9	
365	Greater than 0.75% of mass 198	2.2	
441	Present, but less than mass 443	9.9	
442	40.0 - 110.0% of mass 198	68.4	
443	15.0 - 24.0% of mass 442	12.9	(18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-81679/2	30412002.D	04/12/2013	10:42
	MB 240-81130/22-A	30412003.D	04/12/2013	11:10
	LCS 240-81130/23-A	30412004.D	04/12/2013	11:34
MRC-MW12B-040313	240-22783-6	30412018.D	04/12/2013	17:15
MRC-MW63A-040313	240-22783-7	30412019.D	04/12/2013	17:40
MRC-MW70A-040313	240-22783-8	30412020.D	04/12/2013	18:04
MRC-MW70B-040313	240-22783-9	30412021.D	04/12/2013	18:28
MRC-MW--71A-040313	240-22783-3	30412022.D	04/12/2013	18:52
MRC-MW--71B-040313	240-22783-2	30412023.D	04/12/2013	19:16

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-81679/2 Calibration Date: 04/12/2013 10:42

Instrument ID: A4HP7 Calib Start Date: 03/26/2013 09:55

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/26/2013 13:05

Lab File ID: 30412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6721	0.7177		10.7	10.0	6.8	20.0
N-Nitrosodimethylamine	Ave	0.8317	1.000		12.0	10.0	20.3*	20.0
Pyridine	Ave	1.578	1.785		11.3	10.0	13.1	20.0
Ethyl methacrylate	Ave	1.044	1.214		11.6	10.0	16.3	20.0
3-Chloropropionitrile	Ave	0.7427	0.9338		12.6	10.0	25.7*	20.0
Malononitrile	Ave	1.415	1.801		12.7	10.0	27.3*	20.0
Benzaldehyde	Ave	1.066	1.217	0.0100	11.4	10.0	14.1	20.0
Phenol	Ave	2.217	2.379	0.8000	10.7	10.0	7.3	20.0
Aniline	Ave	2.515	2.705		10.8	10.0	7.5	20.0
Bis(2-chloroethyl)ether	Ave	1.420	1.611	0.7000	11.3	10.0	13.5	20.0
2-Chlorophenol	Ave	1.720	1.795	0.8000	10.4	10.0	4.4	20.0
1,3-Dichlorobenzene	Ave	1.495	1.552		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.855	1.903		10.3	10.0	2.6	20.0
Benzyl alcohol	Ave	1.074	1.206		11.2	10.0	12.3	20.0
1,2-Dichlorobenzene	Ave	1.425	1.470		10.3	10.0	3.2	20.0
2-Methylphenol	Ave	1.587	1.705	0.7000	10.7	10.0	7.4	20.0
bis (2-chloroisopropyl) ether	Ave	1.488	1.850		12.4	10.0	24.3*	20.0
3 & 4 Methylphenol	Ave	1.661	1.772		10.7	10.0	6.7	20.0
N-Nitrosodi-n-propylamine	Ave	0.9063	1.087	0.5000	12.0	10.0	19.9	20.0
Acetophenone	Ave	1.890	2.054	0.0100	10.9	10.0	8.7	20.0
Hexachloroethane	Ave	0.5638	0.6066	0.3000	10.8	10.0	7.6	20.0
Nitrobenzene	Ave	0.3745	0.4302	0.2000	11.5	10.0	14.9	20.0
Isophorone	Ave	0.6139	0.6811	0.4000	11.1	10.0	10.9	20.0
2-Nitrophenol	Lin1		0.2230	0.1000	9.99	10.0	-0.1	20.0
1,3,5-Trichlorobenzene	Ave	0.3111	0.2994		9.62	10.0	-3.8	20.0
2,4-Dimethylphenol	Ave	0.4321	0.4582	0.2000	10.6	10.0	6.0	20.0
Benzoic acid	Lin1		0.2179		19.2	20.0	-4.0	20.0
Bis(2-chloroethoxy)methane	Ave	0.4244	0.4492	0.3000	10.6	10.0	5.9	20.0
2,4-Dichlorophenol	Ave	0.3391	0.3475	0.2000	10.2	10.0	2.5	20.0
1,2,4-Trichlorobenzene	Ave	0.3152	0.3039		9.64	10.0	-3.6	20.0
Naphthalene	Ave	0.9792	0.9622	0.7000	9.83	10.0	-1.7	20.0
4-Chloroaniline	Ave	0.4550	0.4617	0.0100	10.1	10.0	1.5	20.0
Hexachlorobutadiene	Ave	0.1671	0.1645	0.0100	9.85	10.0	-1.5	20.0
1,2,3-Trichlorobenzene	Ave	0.2933	0.2885		9.84	10.0	-1.6	20.0
Caprolactam	Ave	0.0845	0.1035	0.0100	12.3	10.0	22.5*	20.0
4-Chloro-3-methylphenol	Ave	0.3594	0.3808	0.2000	10.6	10.0	6.0	20.0
2-Methylnaphthalene	Ave	0.6149	0.6116	0.4000	9.95	10.0	-0.5	20.0
1-Methylnaphthalene	Ave	0.5991	0.5938		9.91	10.0	-0.9	20.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5094	0.5039		9.89	10.0	-1.1	20.0
Hexachlorocyclopentadiene	Ave	0.2610	0.2753	0.0500	10.5	10.0	5.5	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-81679/2 Calibration Date: 04/12/2013 10:42

Instrument ID: A4HP7 Calib Start Date: 03/26/2013 09:55

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/26/2013 13:05

Lab File ID: 30412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4,6-Trichlorophenol	Ave	0.4017	0.4202	0.2000	10.5	10.0	4.6	20.0
2,4,5-Trichlorophenol	Ave	0.4437	0.4587	0.2000	10.3	10.0	3.4	20.0
2,4-Toluene diamine	Lin		0.1026		7.87	10.0	-21.3*	20.0
1,2,3,4 -Tetrachlorobenzene	Ave	0.4994	0.4828		9.67	10.0	-3.3	20.0
1,1'-Biphenyl	Ave	1.266	1.260	0.0100	9.96	10.0	-0.4	20.0
2-Chloronaphthalene	Ave	1.099	1.109	0.8000	10.1	10.0	0.9	20.0
2-Nitroaniline	Lin1		0.4020	0.0100	11.0	10.0	10.2	20.0
Dimethyl phthalate	Ave	1.120	1.127	0.0100	10.1	10.0	0.6	20.0
2,6-Dinitrotoluene	Lin1		0.2593		9.72	10.0	-2.8	20.0
1,2-Dinitrobenzene	Lin1		0.1355		10.0	10.0	0.0	20.0
Acenaphthylene	Ave	1.552	1.645	0.9000	10.6	10.0	5.9	20.0
3-Nitroaniline	Lin1		0.3370	0.0100	9.83	10.0	-1.7	20.0
2,4-Dinitrophenol	Lin1		0.1547	0.0100	20.8	20.0	3.8	20.0
Acenaphthene	Ave	0.9747	0.9628	0.9000	9.88	10.0	-1.2	20.0
4-Nitrophenol	Ave	0.2117	0.2177		10.3	10.0	2.8	20.0
2,4-Dinitrotoluene	Lin1		0.3621	0.2000	9.91	10.0	-0.9	20.0
Dibenzofuran	Ave	1.481	1.442	0.8000	9.74	10.0	-2.6	20.0
2,3,5,6-Tetrachlorophenol	Lin1		0.3551		9.21	10.0	-7.9	20.0
Diethyl phthalate	Ave	1.070	1.072	0.0100	10.0	10.0	0.1	20.0
4-Chlorophenyl phenyl ether	Ave	0.5777	0.5691	0.4000	9.85	10.0	-1.5	20.0
4-Nitroaniline	Lin1		0.3311	0.0100	9.89	10.0	-1.1	20.0
Fluorene	Ave	1.184	1.190	0.9000	10.1	10.0	0.6	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1586	0.0100	10.5	10.0	5.3	20.0
N-Nitrosodiphenylamine	Ave	0.5865	0.6113	0.0100	10.4	10.0	4.2	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.7912	0.8894		11.2	10.0	12.4	20.0
Azobenzene	Ave	0.7912	0.8895		11.2	10.0	12.4	20.0
4-Bromophenyl phenyl ether	Ave	0.2070	0.2048	0.1000	9.89	10.0	-1.1	20.0
Hexachlorobenzene	Ave	0.2151	0.1968	0.1000	9.15	10.0	-8.5	20.0
Atrazine	Ave	0.1287	0.1538	0.0100	11.9	10.0	19.5	20.0
Pentachlorophenol	Lin1		0.1528	0.0500	18.1	20.0	-9.6	20.0
Phenanthrene	Ave	1.070	1.049	0.7000	9.80	10.0	-2.0	20.0
Anthracene	Ave	1.004	1.088	0.7000	10.8	10.0	8.3	20.0
Carbazole	Ave	1.001	1.020	0.0100	10.2	10.0	2.0	20.0
Di-n-butyl phthalate	Ave	1.146	1.175	0.0100	10.3	10.0	2.5	20.0
Fluoranthene	Ave	1.131	1.183	0.6000	10.5	10.0	4.6	20.0
Benzidine	Lin1		0.5672		10.2	10.0	2.4	20.0
Pyrene	Ave	1.070	1.153	0.6000	10.8	10.0	7.7	20.0
Butyl benzyl phthalate	Lin1		0.4687	0.0100	10.5	10.0	5.2	20.0
3,3'-Dimethoxybenzidine	Lin1		0.2692		10.6	10.0	5.8	20.0
4,4'-Methylene bis(2-chloroaniline)	Lin1		0.2037		10.0	10.0	0.1	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-81679/2 Calibration Date: 04/12/2013 10:42

Instrument ID: A4HP7 Calib Start Date: 03/26/2013 09:55

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 03/26/2013 13:05

Lab File ID: 30412002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
3,3'-Dichlorobenzidine	Ave	0.3885	0.4262	0.0100	11.0	10.0	9.7	20.0
Bis(2-ethylhexyl) phthalate	Lin1		0.6232	0.0100	9.87	10.0	-1.3	20.0
Benzo[a]anthracene	Ave	0.9641	1.000	0.8000	10.4	10.0	3.7	20.0
Chrysene	Ave	0.9059	0.9085	0.7000	10.0	10.0	0.3	20.0
Di-n-octyl phthalate	Lin1		1.297	0.0100	10.5	10.0	5.4	20.0
Benzo[b]fluoranthene	Ave	1.126	1.172	0.7000	10.4	10.0	4.2	20.0
Benzo[k]fluoranthene	Ave	1.199	1.244	0.7000	10.4	10.0	3.7	20.0
Benzo[a]pyrene	Lin1		1.152	0.7000	9.57	10.0	-4.3	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.137	1.169	0.5000	10.3	10.0	2.8	20.0
Dibenz(a,h)anthracene	Ave	0.9357	0.9571	0.4000	10.2	10.0	2.3	20.0
Benzo[g,h,i]perylene	Ave	0.9766	0.9679	0.5000	9.91	10.0	-0.9	20.0
2-Fluorophenol (Surr)	Ave	1.588	1.681		10.6	10.0	5.9	20.0
Phenol-d5 (Surr)	Ave	2.101	2.289		10.9	10.0	8.9	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3566	0.4080		11.4	10.0	14.4	20.0
2-Fluorobiphenyl (Surr)	Ave	1.250	1.230		9.84	10.0	-1.6	20.0
2,4,6-Tribromophenol (Surr)	Lin1		0.1821		8.93	10.0	-10.7	20.0
Terphenyl-d14 (Surr)	Ave	0.6653	0.6724		10.1	10.0	1.1	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab File ID: 30412003.D Lab Sample ID: MB 240-81130/22-A

Matrix: Water Date Extracted: 04/09/2013 10:13

Instrument ID: A4HP7 Date Analyzed: 04/12/2013 11:10

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81130/23-A	30412004.D	04/12/2013 11:34
MRC-MW12B-040313	240-22783-6	30412018.D	04/12/2013 17:15
MRC-MW63A-040313	240-22783-7	30412019.D	04/12/2013 17:40
MRC-MW70A-040313	240-22783-8	30412020.D	04/12/2013 18:04
MRC-MW70B-040313	240-22783-9	30412021.D	04/12/2013 18:28
MRC-MW--71A-040313	240-22783-3	30412022.D	04/12/2013 18:52
MRC-MW--71B-040313	240-22783-2	30412023.D	04/12/2013 19:16

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22783-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81130/22-A

Matrix: Water | Lab File ID: 30412003.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/09/2013 10:13

Sample wt/vol: 1000(mL) | Date Analyzed: 04/12/2013 11:10

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81679 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	54		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	46		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	68		21-110
4165-62-2	Phenol-d5 (Surr)	54		21-110
1718-51-0	Terphenyl-d14 (Surr)	71		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30412004.D

Lab ID: LCS 240-81130/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	11.2	56	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: STD6 240-79447/10 Date Analyzed: 03/26/2013 13:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30326010.D Heated Purge: (Y/N) N

Calibration ID: 14264

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		265483	5.92	1039919	7.04	608045	8.56
UPPER LIMIT		530966	6.42	2079838	7.54	1216090	9.06
LOWER LIMIT		132742	5.42	519960	6.54	304023	8.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-79447/11		290579	5.92	1152244	7.04	693603	8.55
CCV 240-81679/2 CCVIS		283900	6.09	1148470	7.23	654670	8.74

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: STD6 240-79447/10 Date Analyzed: 03/26/2013 13:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30326010.D Heated Purge: (Y/N) N

Calibration ID: 14264

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		969063	9.83	1099308	12.40	912884	14.49
UPPER LIMIT		1938126	10.33	2198616	12.90	1825768	14.99
LOWER LIMIT		484532	9.33	549654	11.90	456442	13.99
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-79447/11		1099311	9.83	1266326	12.41	1044766	14.50
CCV 240-81679/2 CCVIS		1006074	10.01	1088064	12.68	895940	14.84

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: CCV 240-81679/2 Date Analyzed: 04/12/2013 10:42

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30412002.D Heated Purge: (Y/N) N

Calibration ID: 14268

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		283900	6.09	1148470	7.23	654670	8.74
UPPER LIMIT		567800	6.59	2296940	7.73	1309340	9.24
LOWER LIMIT		141950	5.59	574235	6.73	327335	8.24
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-81130/22-A		253997	6.09	1021691	7.23	592378	8.74
LCS 240-81130/23-A		249329	6.09	1005916	7.23	588413	8.74
240-22783-6	MRC-MW12B-040313	285649	6.09	1132980	7.23	648582	8.74
240-22783-7	MRC-MW63A-040313	287866	6.09	1118689	7.23	646778	8.74
240-22783-8	MRC-MW70A-040313	297192	6.09	1135895	7.23	664821	8.74
240-22783-9	MRC-MW70B-040313	299524	6.09	1166725	7.23	673170	8.74
240-22783-3	MRC-MW--71A-040313	304464	6.09	1182018	7.23	685321	8.74
240-22783-2	MRC-MW--71B-040313	302080	6.09	1139317	7.23	662594	8.74

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: CCV 240-81679/2 Date Analyzed: 04/12/2013 10:42

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30412002.D Heated Purge: (Y/N) N

Calibration ID: 14268

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1006074	10.01	1088064	12.68	895940	14.84
UPPER LIMIT		2012148	10.51	2176128	13.18	1791880	15.34
LOWER LIMIT		503037	9.51	544032	12.18	447970	14.34
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-81130/22-A		939346	10.01	982933	12.68	775771	14.84
LCS 240-81130/23-A		913650	10.01	1007491	12.67	793011	14.84
240-22783-6	MRC-MW12B-040313	1026700	10.01	1098379	12.67	877316	14.84
240-22783-7	MRC-MW63A-040313	1024784	10.01	1094301	12.67	887894	14.84
240-22783-8	MRC-MW70A-040313	1036129	10.01	1118719	12.67	890516	14.84
240-22783-9	MRC-MW70B-040313	1061145	10.01	1133162	12.67	904853	14.84
240-22783-3	MRC-MW--71A-040313	1066221	10.01	1144024	12.67	938509	14.84
240-22783-2	MRC-MW--71B-040313	1058989	10.01	1117165	12.67	896486	14.84

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 81130 Batch Start Date: 04/09/13 13:00 Batch Analyst: Earle, Steve

Batch Method: 3520C Batch End Date: 04/10/13 07:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	InitialAmount	FinalAmount	FirstAdjustpH	EXBNALCS1 00035	EXBNASURRW 00024
240-22783-E-2	MRC-MW--71B-040313	3520C, 8270D	T	7 SU	1010 mL	2.0 mL	2 SU		1 mL
240-22783-E-3	MRC-MW--71A-040313	3520C, 8270D	T	7 SU	1050 mL	2.0 mL	2 SU		1 mL
240-22783-L-6	MRC-MW12B-040313	3520C, 8270D	T	7 SU	1010 mL	2.0 mL	2 SU		1 mL
240-22783-F-7	MRC-MW63A-040313	3520C, 8270D	T	7 SU	1050 mL	2.0 mL	2 SU		1 mL
240-22783-E-8	MRC-MW70A-040313	3520C, 8270D	T	7 SU	1000 mL	2.0 mL	2 SU		1 mL
240-22783-D-9	MRC-MW70B-040313	3520C, 8270D	T	7 SU	1000 mL	2.0 mL	2 SU		1 mL
MB 240-81130/22		3520C, 8270D		7 SU	1000 mL	2.0 mL	2 SU		1 mL
LCS 240-81130/23		3520C, 8270D		7 SU	1000 mL	2.0 mL	2 SU	1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXRESTEKSPKW 00019					
240-22783-E-2	MRC-MW--71B-040313	3520C, 8270D	T						
240-22783-E-3	MRC-MW--71A-040313	3520C, 8270D	T						
240-22783-L-6	MRC-MW12B-040313	3520C, 8270D	T						
240-22783-F-7	MRC-MW63A-040313	3520C, 8270D	T						
240-22783-E-8	MRC-MW70A-040313	3520C, 8270D	T						
240-22783-D-9	MRC-MW70B-040313	3520C, 8270D	T						
MB 240-81130/22		3520C, 8270D							
LCS 240-81130/23		3520C, 8270D		1 mL					

Batch Notes	
Acid used for pH adjust Lot #	711898
Na2SO4 Lot Number	857424
Prep Solvent Lot #	921740

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE ID MRC-MW12B-040313

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST	IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	CONCENTRATION PPB
285649	1	570819	4	2000	0.6721	23.55
			Amt. inj	Sample Volume (ML)		
			1	1010		

1,4-Dioxane = 24 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4HP7\20130412-18805.b\30412018.D		
Lims ID:	240-22783-L-6-A	Client ID:	MRC-MW12B-040313
Inject. Date:	12-Apr-2013 17:15:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018805-018		
Misc. Info.:	240-22783-L-6-A		
Operator:	001710	Instrument ID:	A4HP7
Injection Vol:	1.0 ul	ALS Bottle#:	18
Lims Batch ID:	81679	Lims Sample ID:	18
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4HP7\20130412-18805.b\8270_hp7.m		
Last Update:	15-Apr-2013 13:20:21	Calib Date:	26-Mar-2013 17:03:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4HP7\20130326-18258.b\30326020.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK015		
First Level Reviewer: gruberj		Date:	15-Apr-2013 13:09:54

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.091	6.093	-0.002	97	285649	4.00	
* 2 Naphthalene-d8	136	7.225	7.232	-0.007	100	1132980	4.00	
* 3 Acenaphthene-d10	164	8.739	8.741	-0.002	93	648582	4.00	
* 4 Phenanthrene-d10	188	10.006	10.008	-0.002	98	1026700	4.00	
* 5 Chrysene-d12	240	12.670	12.677	-0.007	97	1098379	4.00	
* 6 Perylene-d12	264	14.842	14.843	-0.001	97	877316	4.00	
$ 7 2-Fluorophenol	112	4.797	4.793	0.004	94	604073	5.33	
$ 8 Phenol-d5	99	5.728	5.729	-0.001	89	938047	6.25	
$ 9 Nitrobenzene-d5	82	6.583	6.585	-0.002	91	683060	6.76	
$ 10 2-Fluorobiphenyl (Surr)	172	8.145	8.147	-0.002	100	1192793	5.88	
$ 11 2,4,6-Tribromophenol	330	9.407	9.415	-0.008	87	191549	5.91	
$ 12 Terphenyl-d14	244	11.397	11.399	-0.002	99	1247105	6.83	
24 1,4-Dioxane	88	2.288	2.285	0.003	97	570819	11.9	

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW12B-040313	240-22783-6	96
	MB 240-80968/5	107
	LCS 240-80968/4	111
	240-22774-E-1 MS	100
	240-22774-E-1 MSD	98

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Ave	38438 11934310	123659 81376315	406582 36666789	1209668 159521463	3969261	0.251 116	0.965 772	3.86 347	11.6 1543	38.6
Ethene	Ave	42640 18928943	178527 128474180	602389 57345534	1803144 247666290	6346457	0.440 203	1.69 1355	6.78 610	20.3 2710	67.8
Acetylene	Ave	10063 5189958	41670 40355973	142717 16648752	430060 77009812	1642953	0.408 188	1.57 1254	6.27 564	18.8 2508	62.7
Ethane	Ave	47848 22508675	203442 153167226	696560 68933291	2103657 300072325	7472670	0.472 218	1.81 1452	7.26 653	21.8 2903	72.6
Propene	Ave	52126 27266136	224438 185584124	758081 82393900	2265818 357727706	9132788	0.660 305	2.54 2030	10.2 914	30.5 4060	102
Propane	Ave	63821 34014805	279391 231733482	964752 104277738	2915538 454872922	11246033	0.691 319	2.66 2127	10.6 957	31.9 4253	106
Propane, 2-methyl	Ave	76200 45765053	333875 311308529	1215789 140338679	3674766 613077945	15084964	0.911 420	3.50 2802	14.0 1261	42.0 5604	140
1,1,1-Trifluoroethane	Ave	2054100 367330855	8954283	36585949 500284541	121933404	249161727	65.8 9114	253	1013 12152	3038	6076

Curve Type Legend:

Ave = Average

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909		0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392		1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489		1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655		1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512		3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705		3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319		5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657			2.572 - 2.772	2.699

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Sample No.: CCVRT 240-80968/3 Date Analyzed: 04/08/2013 14:54

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0040803.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE		
				RT #		
CONTINUING CALIBRATION SURROGATE				2.70		
UPPER LIMIT				2.75		
LOWER LIMIT				2.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-80968/3		04/08/2013 14:54	Z0040803.D	2.70		
LCS 240-80968/4		04/08/2013 15:06	Z0040804.D	2.70		
MB 240-80968/5		04/08/2013 15:18	Z0040805.D	2.70		
240-22774-E-1 MS		04/08/2013 16:32	Z0040811.D	2.70		
240-22774-E-1 MSD		04/08/2013 16:44	Z0040812.D	2.70		
CCV 240-80968/13		04/08/2013 16:56	Z0040813.D	2.71		
240-22783-6	MRC-MW12B-040313	04/08/2013 17:08	Z0040814.D	2.70		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVRT 240-80968/3 Calibration Date: 04/08/2013 14:54

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040803.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	95933		98.8	116	-14.7	30.0
Ethene	Ave	94091	87186		188	203	-7.3	30.0
Acetylene	Ave	27012	29909		208	188	10.7	30.0
Ethane	Ave	102982	92711		196	218	-10.0	30.0
Propene	Ave	85073	77904		279	305	-8.4	30.0
Propane	Ave	101861	90009		282	319	-11.6	30.0
Propane, 2-methyl	Ave	100175	88417		371	420	-11.7	30.0
1,1,1-Trifluoroethane	Ave	37902	40491		2600	2440	6.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCVRT 240-80968/3 Calibration Date: 04/08/2013 14:54

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040803.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.49	1.44	1.54
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.40	5.30	5.50
1,1,1-Trifluoroethane	2.70	2.60	2.80

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-80968/13 Calibration Date: 04/08/2013 16:56

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040813.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	92734		95.5	116	-17.5	30.0
Ethene	Ave	94091	79967		173	203	-15.0	30.0
Acetylene	Ave	27012	26511		185	188	-1.9	30.0
Ethane	Ave	102982	88882		188	218	-13.7	30.0
Propene	Ave	85073	70723		253	305	-16.9	30.0
Propane	Ave	101861	86692		272	319	-14.9	30.0
Propane, 2-methyl	Ave	100175	85716		360	420	-14.4	30.0
1,1,1-Trifluoroethane	Ave	37902	37199		2390	2440	-1.9	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: CCV 240-80968/13 Calibration Date: 04/08/2013 16:56

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0040813.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: MB 240-80968/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0040805.D Lab File ID:(2)

Date Analyzed:(1) 04/08/2013 15:18 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-80968/4	04/08/2013 15:06	
	240-22774-E-1 MS	04/08/2013 16:32	
	240-22774-E-1 MSD	04/08/2013 16:44	
MRC-MW12B-040313	240-22783-6	04/08/2013 17:08	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-80968/5

Matrix: Water Lab File ID: Z0040805.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 04/08/2013 15:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 80968 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.50	U	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	107		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040804.D

Lab ID: LCS 240-80968/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	218	107	64-130	
Ethane	218	228	105	77-127	
Methane	116	107	93	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040811.D

Lab ID: 240-22774-E-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	2030	5.0 U	1960	97	51-129	
Ethane	2180	5.0 U	2130	98	59-133	
Methane	1160	2800	3800	88	13-173	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0040812.D

Lab ID: 240-22774-E-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	2030	1930	95	2	34	51-129	
Ethane	2180	2120	97	0	34	59-133	
Methane	1160	3960	103	4	42	13-173	

Column to be used to flag recovery and RPD values

FORM III RSK-175

SDG 240-22783
SAMPLE ID MRC-MW12B-040313

SAMPLE CALC

INITIAL CF	DILUTION	COMPOUND OF INTEREST	Final Extract Volume (ML)	Initial Extract Volume (UL)	CONCENTRATION PPM
112419	1	86064	1	1000	0.77

Methane = 0.77 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\ZPID\20130408-18648.b\Z0040814.D		
Lims ID:	240-22783-E-6	Client ID:	MRC-MW12B-040313
Inject. Date:	08-Apr-2013 17:08:44	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018648-014		
Misc. Info.:			
Operator:	402582	Instrument ID:	ZPID
Purge Vol:	1.000 mL	ALS Bottle#:	1
Lims Batch ID:	80968	Lims Sample ID:	14
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20130408-18648.b\RSK175.m		
Last Update:	09-Apr-2013 08:47:43	Calib Date:	18-Jan-2013 16:58:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Column Type:		Column Dia:	
Process Host:	XAWRK015		

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	0.906	0.908	-0.002	86064	0.7656	
2 Ethylene						
2		1.405				
4 Ethane						
2		1.681				
$ 5 1,1,1-Trifluoroethane						
2	2.703	2.705	-0.002	95465337	2518.8	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **May 2, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- SELECT METALS, ALKALINITY, AMMONIA-N, CHLORIDE, DOC, NITRATE-N, NITRITE-N, ORTHOPHOSPHATE-P, SILICON DIOXIDE, SULFATE, AND TDS**
LOCKHEED-MIDDLE RIVER COMPLEX (MRC)
SDG 240-22783-1

SAMPLES: 7/Aqueous/

MRC-MW-67A-040313	MRC-MW-68A-040313
MRC-MW-71A-040313	MRC-MW-71B-040313
MRC-MW12B-040313	MRC-MW63A-040313
MRC-MW70A-040313	

Overview

The sample set for Lockheed MRC, SDG 240-22783-1, consists of seven (7) aqueous environmental samples. This SDG contained no field duplicate pairs.

All samples were analyzed for select metals. Sample MRC-MW12B-040313 was analyzed for alkalinity, ammonia-N, chloride, dissolved organic carbon (DOC), nitrate-N, nitrite-N, orthophosphate-P, silicon dioxide, sulfate, and total dissolved solids (TDS). The samples were collected by Tetra Tech April 3rd, 2013 and analyzed by TestAmerica. Metals analyses were conducted using methods 6010B and 6020A. Mercury analyses were conducted using method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, GC/MS tuning, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, laboratory control sample recoveries, matrix spike recoveries, ICP serial dilution, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Calcium [(1)]	206 ug/L	1030 ug/L
Magnesium [(1)]	43.0 ug/L	215 ug/L

Manganese [1]	0.63 ug/L	3.1 ug/L
Barium [2]	0.32 ug/L	1.6 ug/L
Cobalt [2]	0.18 ug/L	0.9 ug/L
Mercury [3]	0.15 ug/L	0.75 ug/L
Antimony [4]	0.41 ug/L	2.1 ug/L
Barium [4]	0.47 ug/L	2.3 ug/L
Cobalt [4]	0.74 ug/L	3.7 ug/L
Nickel [4]	1.21 ug/L	6.1 ug/L
Ammonia [5]	0.045 mg/L	0.22 mg/L

[1] Maximum concentration found in a preparation blank affecting samples in batch 240-81088.
[2] Maximum concentration found in a preparation blank affecting samples in batch 240-98850.
[3] Maximum concentration found in a calibration blank affecting samples analyzed on 4/19/13.
[4] Maximum concentration found in a calibration blank affecting samples analyzed on 4/18/13.
[5] Maximum concentration found in a calibration blank affecting samples analyzed on 4/11/13.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The CRDL standard analyzed on 4/18/13 had a percent recovery <90% for copper and percent recoveries > 110% for selenium, nickel, zinc, and vanadium. All samples were affected. Positive copper results < 2X CRDL were qualified estimated (J) due to conflicting directional bias. Non-detected copper results were qualified as biased low (UL). Positive selenium, nickel, zinc, and vanadium results < 2X CRDL were qualified as (J) due to conflicting directional bias.

- The matrix spike and matrix spike duplicate for preparation batch 98850 had a percent recovery > 125% for beryllium. All samples were affected. Positive results were qualified as either biased high (K) or estimated (J) due to conflicting directional bias.

- Interference standard analyzed on 4/18/13 had a percent recovery >120% for zinc. All samples were affected. Positive results were qualified as either biased high (K) or estimated (J) due to conflicting directional bias.

- The matrix spike had a percent recoveries > 120% for chloride, sulfate, nitrate-N, and orthophosphate-P. Sample MRC-MW12B-040313 was affected. Positive results were qualified as either biased high (K) or estimated (J) due to conflicting directional bias. Non-detected results were not qualified.

- The laboratory duplicate had a relative percent difference > 20% for alkalinity. Sample MRC-MW12B-040313 was affected. The positive result was qualified as estimated (J).

Notes

Non-detected results were reported at the MDL.

The CRDL standard analyzed on 4/19/13 had a percent recovery >110% for mercury. Samples MRC-MW-67A-040313, MRC-MW-68A-040313, MRC-MW-71A-040313, MRC-MW-71B-040313, and MRC-MW70A-040313 were affected. No validation action was warranted as sample results were qualified for blank contamination.

The continuing calibration analyzed on 4/4/13 at 19:40 had a percent recovery > 110% for orthophosphate-P. Sample MRC-MW12B-040313 was affected. No validation action was warranted as the sample result was non-detected.

The validator adjusted the IDs for samples: MRC-MW-67A-040313, MRC-MW-68A-040313, MRC-MW-71A-040313, and MRC-MW-71B-040313 to match the COC by removing an additional dash added by the lab.

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted in the qualification of sample results. CRDL standard non-compliances for mercury, copper, selenium, nickel, zinc, and vanadium resulted in the qualification of sample results. Laboratory duplicate non-compliances for alkalinity resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Matrix spike non-compliances for beryllium, chloride, sulfate, nitrate-N, and orthophosphate-P resulted in the qualification of sample results. Interference standard non-compliance for zinc resulted in the qualification of sample results.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993. The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313			MRC-MW63A-040313			MRC-MW-67A-040313			MRC-MW-68A-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6			240-22783-7			240-22783-4			240-22783-5		
FRACTION: M	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U		0.3	U	
ARSENIC		0.9	U		0.9	U		0.9	U		0.9	U	
BARIUM		76			73			780			2500		
BERYLLIUM		0.23	J	DP	0.19	J	DP	400	K	D	280	K	D
CADMIUM		0.1	U		0.1	U		8.6			9.4		
CALCIUM		9000											
CHROMIUM		0.9	U		0.9	U		1.6	J	P	0.9	U	
COBALT		8.1			12			8100			1300		
COPPER		1.7	J	CP	5.6			1800			120		
IRON		7100											
LEAD		0.28	J	P	0.79	J	P	5.1			0.83	J	P
MAGNESIUM		4600	J	P									
MANGANESE		360											
MERCURY		0.12	U		0.1	U		0.13	B	A	0.1	U	
MOLYBDENUM		0.2	U		0.2	U		0.2	U		0.29	J	P
NICKEL		23			21			14000			6200		
POTASSIUM		3600	J	P									
SELENIUM		0.5	U		1	J	CP	3.6	J	CP	3.1	J	CP
SILICON DIOXIDE		9800											
SILVER		0.1	U		0.1	U		0.18	J	P	0.9	J	P
SODIUM		9200											
THALLIUM		0.2	U		0.2	U		1.1	J	P	0.42	J	P
VANADIUM		0.8	U		1.3	J	CP	0.81	J	CP	0.8	U	
ZINC		41	K	K	15	J	CKP	21000	K	K	7800	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW70A-040313			MRC-MW-71A-040313			MRC-MW-71B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-8			240-22783-3			240-22783-2		
FRACTION: M	SAMP_DATE	4/3/2013			4/3/2013			4/3/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.43	B	A	0.3	U	
ARSENIC		2.8	J	P	0.9	U		0.9	U	
BARIUM		68			39			67		
BERYLLIUM		1.3	K	D	6.4	K	D	0.1	U	
CADMIUM		0.1	U		13			0.1	U	
CALCIUM										
CHROMIUM		0.9	U		0.9	U		0.9	U	
COBALT		27			54			29		
COPPER		1	J	CP	4.1			0.5	UL	C
IRON										
LEAD		0.69	J	P	0.4	J	P	0.2	U	
MAGNESIUM										
MANGANESE										
MERCURY		0.1	U		0.1	U		0.15	B	A
MOLYBDENUM		0.2	U		0.2	U		0.2	U	
NICKEL		29			110			35		
POTASSIUM										
SELENIUM		0.79	J	CP	0.5	U		0.5	U	
SILICON DIOXIDE										
SILVER		0.1	U		0.1	U		0.1	U	
SODIUM										
THALLIUM		0.2	U		0.2	U		0.2	U	
VANADIUM		1.8	J	CP	0.99	J	CP	0.8	U	
ZINC		48	K	K	180	K	K	84	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW12B-040313		
SDG: 240-22783-1	LAB_ID	240-22783-6		
FRACTION: MISC	SAMP_DATE	4/3/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALKALINITY		51	J	F
AMMONIA-N		0.13	B	A
CHLORIDE		7.4	K	D
DISSOLVED ORGANIC CARBON		0.56	J	P
NITRATE-N		0.053	J	DP
NITRITE-N		0.012	U	
ORTHOPHOSPHATE-P		0.044	U	
SULFATE		3.8	K	D
TOTAL DISSOLVED SOLIDS		87		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

MW-67A mmc 5/2/13

Client Sample ID: MRC-~~MW-67A~~-040313 Lab Sample ID: 240-22783-4

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 14:40

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.13	0.20	0.10	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-~~MW--68A~~-040313 mw-68A mmc 5/2/13

Lab Sample ID: 240-22783-5

Lab Name: TestAmerica Irvine

Job No.: 240-22783-1

SDG ID.:

Matrix: Water

Date Sampled: 04/03/2013 15:39

Reporting Basis: WET

Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC ~~MW-71A~~ 040313 MW-71A mmc 5/2/13

Lab Sample ID: 240-22783-3

Lab Name: TestAmerica Irvine

Job No.: 240-22783-1

SDG ID.:

Matrix: Water

Date Sampled: 04/03/2013 12:57

Reporting Basis: WET

Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-~~MW-71B~~-040313 MW-71B mmc 5/2/13

Lab Sample ID: 240-22783-2

Lab Name: TestAmerica Irvine

Job No.: 240-22783-1

SDG ID.:

Matrix: Water

Date Sampled: 04/03/2013 11:32

Reporting Basis: WET

Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.15	0.20	0.10	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 10:55

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW63A-040313 Lab Sample ID: 240-22783-7

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 12:40

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW70A-040313 Lab Sample ID: 240-22783-8

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 14:05

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

mw-67A mmc 5/2/13

Client Sample ID: MRC-~~MW--67A-~~040313 Lab Sample ID: 240-22783-4

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 14:40

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	400	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	8.6	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	780	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	1.6	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	1800	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	14000	200	50	ug/L			100	6020
7439-92-1	Lead	5.1	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	3.6	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	8100	100	10	ug/L		B	100	6020
7440-22-4	Silver	0.18	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	1.1	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	21000	2000	400	ug/L			100	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	0.81	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

MW-68A mmc 5/21/13

Client Sample ID: MRC-~~MW--68A~~-040313 Lab Sample ID: 240-22783-5

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 15:39

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	280	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	9.4	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	2500	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	120	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	6200	200	50	ug/L			100	6020
7439-92-1	Lead	0.83	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	3.1	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	1300	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	0.90	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.42	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	7800	2000	400	ug/L			100	6020
7439-98-7	Molybdenum	0.29	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

mw-71A mmc 5/2/13

Client Sample ID: MRC-~~MW-71A~~-040313 Lab Sample ID: 240-22783-3

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 12:57

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.43	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	6.4	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	13	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	39	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	4.1	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	110	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.40	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	54	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	180	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	0.99	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-~~MW-71B~~-040313 mw-71B mmc 5/2/13 Lab Sample ID: 240-22783-2

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 11:32

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	67	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	35	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	29	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	84	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 10:55

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	9000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	7100	200	81	ug/L			1	6010C
7440-09-7	Potassium	3600	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	4600	5000	34	ug/L	J	B	1	6010C
7439-96-5	Manganese	360	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	9200	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	9800	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 10:55

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.23	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	76	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.7	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	23	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.28	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	8.1	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	41	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW63A-040313 Lab Sample ID: 240-22783-7

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 12:40

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.19	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	73	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	5.6	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	21	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.79	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	1.0	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	12	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	15	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	1.3	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW70A-040313 Lab Sample ID: 240-22783-8

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 14:05

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	2.8	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.3	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	68	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.0	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	29	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.69	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.79	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	27	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	48	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	1.8	20	0.80	ug/L	J		1	6020

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 10:55

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	51	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	87	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	7.4	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.053	0.10	0.023	mg/L	J		1	300.0
14808-79-8	Sulfate	3.8	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U	^	1	300.0
7664-41-7	Ammonia (as N)	0.13	0.20	0.035	mg/L	J	B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW12B-040313 Lab Sample ID: 240-22783-6

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG ID.:

Matrix: Water Date Sampled: 04/03/2013 10:55

Reporting Basis: WET Date Received: 04/04/2013 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	0.56	1.0	0.24	mg/L	J		1	9060

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanayage	Site Contact: Walt Payon	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9693	1 of 1 COCs
City/State/Zip: Germantown, MD	Email:	Analysis Turnaround Time (in BUS days)		
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC- Ground Water Sampling	Method of Shipment/Carrier: Fed EX			
Project Number: 112IC04795-02	Shipping/Tracking No:			
PO#				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C)	VOCs	Total metals	1,4 Dioxane	Dissolved Gases	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Mg, Na, Si-Dis	DOC	Sample Specific Notes / Special Instructions:
TB-040313	4-3-13	—		X						2					N	G	X								
MRC-MW-71B-040313	↓	1132		↓				2	1	3							X	X	X						
MRC-MW-71A-040313		1257						2	1	3							X	X	X						
MRC-MW-67A-040313		1440							1									X							
MRC-MW-69A-040313		1539							3									X							* MS/MSD
MRC-MW 12B-040313		1055						3	2	5			3				X	X	X	X	X	X	X	X	
MRC-MW 63A-040313		1240							1	3			2				X	X	X						
MRC-MW 70A-040313		1405							1	3			2				X	X	X						
MRC-MW 70B-040313	↓	1530		↓						3			2				X	X							

240-22783 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	4-3-13 / 1615	[signature]	TestAmerica	4/3/13/1620
[signature]	TestAmerica	4/3/13 / 1710	[signature]	TAC	4/4/13 915

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TAL-0018 (1008)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC - GROUNDWATER SAMPLING

Report Number: 240-22783-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury (samples 2, 3, 4, 5, 7 & 8 only for mercury) analysis were performed at the TestAmerica Irvine Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/04/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.0 and 1.2 C.

Sample MRC-MW70B-040313 is marked for VOCs and Metals on the COC, however, the lab received volume for VOCs and 1,4-Dioxane. The laboratory will log sample MRC-MW70B-040313 for VOCs and 1,4-Dioxane per volume received.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-040313 (240-22783-1), MRC-MW-71B-040313 (240-22783-2), MRC-MW-71A-040313 (240-22783-3), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7), MRC-MW70A-040313 (240-22783-8) and MRC-MW70B-040313 (240-22783-9) were analyzed for volatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/09/2013 and 04/10/2013.

Methylene Chloride was detected in method blank MB 240-81347/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Benzene was detected in method blank MB 240-81347/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MRC-MW-71B-040313MS/MSD (240-22783-2) in batch 240-81120.

Samples MRC-MW-71B-040313 (240-22783-2)[3.33X], MRC-MW12B-040313 (240-22783-6)[10X] and MRC-MW70B-040313 (240-22783-9)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample(LCS) for batch 81347 exceeded control limits for the following analyte(s): Trichlorofluoromethane--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW–71B-040313 (240-22783-2), MRC-MW–71A-040313 (240-22783-3), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7), MRC-MW70A-040313 (240-22783-8) and MRC-MW70B-040313 (240-22783-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/09/2013 and analyzed on 04/12/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/08/2013.

No difficulties were encountered during the dissolved gases analysis. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/09/2013 and analyzed on 04/11/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-81088/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW–71B-040313 (240-22783-2), MRC-MW–71A-040313 (240-22783-3), MRC-MW–67A-040313 (240-22783-4), MRC-MW–68A-040313 (240-22783-5), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7) and MRC-MW70A-040313 (240-22783-8) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/17/2013 and analyzed on 04/18/2013.

Barium and Cobalt were detected in method blank MB 440-98850/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Nickel and Zinc failed the recovery criteria low for the MS of sample MRC-MW–68A-040313MS (240-22783-5) in batch 440-99213. Barium, Beryllium and Cobalt failed the recovery criteria high.

Nickel and Zinc failed the recovery criteria low for the MSD of sample MRC-MW–68A-040313MSD (240-22783-5) in batch 440-99213. Beryllium failed the recovery criteria high.

Samples MRC-MW–67A-040313 (240-22783-4)[100X] and MRC-MW–68A-040313 (240-22783-5)[100X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The matrix spike / matrix spike duplicate (MS/MSD) percent recoveries for batch 440-98850 were outside control limits for Be. This is attributed to matrix interferences.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW–71B-040313 (240-22783-2), MRC-MW–71A-040313 (240-22783-3), MRC-MW–67A-040313 (240-22783-4), MRC-MW–68A-040313 (240-22783-5), MRC-MW12B-040313 (240-22783-6), MRC-MW63A-040313 (240-22783-7) and MRC-MW70A-040313 (240-22783-8) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/09/2013, 04/19/2013 and 04/23/2013 and analyzed on 04/10/2013, 04/19/2013 and 04/23/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 04/05/2013.

No difficulties were encountered during the TDS analysis. All quality control parameters were within the acceptance limits.

ANIONS

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/04/2013.

Nitrate as N and Orthophosphate as P failed the recovery criteria high for the MS of sample MRC-MW12B-040313MS (240-22783-6) in

batch 240-80671.

The continuing calibration verification (CCV) for orthophosphate associated with batch 80671 recovered above the upper control limit. The sample associated with this CCV was non-detect for the affected analyte; therefore, the data has been reported.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ANIONS

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/04/2013.

Chloride and Sulfate failed the recovery criteria high for the MS of sample MRC-MW12B-040313MS (240-22783-6) in batch 240-80670.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ALKALINITY

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/11/2013.

No difficulties were encountered during the alkalinity analysis. All quality control parameters were within the acceptance limits.

AMMONIA

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/11/2013.

Ammonia (as N) was detected in method blank MB 240-81587/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the ammonia analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Sample MRC-MW12B-040313 (240-22783-6) was analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/12/2013.

No difficulties were encountered during the TOC analysis. All quality control parameters were within the acceptance limits.

Sample Report

MRC-MW-67A-040313

Sample Table

Sample Name	240-22783-A-4-A@100
Data File Name	133SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\130418-1.b
Acq Date Time	2013-04-18T14:59:18-07:00
Sample Type	Sample
Dilution	100
Comment	CONIZN 6020 440-98850 RDNH
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

reported as 21,000 ug/L

→ 206.995 x 100DF = 20,699.50 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	3.485	348.477	2.77	10148	3.12	3000	
Na	23	1	No Gas	8468.360	846836.040	0.97	148751532	1.90	100000	
Mg	24	1	No Gas	2009.005	200900.515	1.16	23778384	1.63	112500	
Al	27	1	No Gas	282.649	28264.863	1.31	4746118	1.62	4000	
K	39	1	No Gas	146.099	14609.854	1.80	5330001	1.24	87500	
Ca	44	1	No Gas	1043.296	104329.609	1.62	831602	2.30	225000	
V	51	1	No Gas	0.106	10.597	63.92	992	224.80	4000	
Cr	52	1	No Gas	-0.092	-9.198	-7.40	11756	1.84	4000	
Mn	55	1	No Gas	133.637	13363.708	1.22	5198347	1.41	4000	
Fe	56	1	No Gas	76.117	7611.699	2.53	4671900	1.93	40000	
Co	59	1	No Gas	80.838	8083.845	0.93	2552846	1.80	4000	
Ni	60	1	No Gas	140.372	14037.178	0.96	981529	1.63	4000	
Cu	65	1	No Gas	22.399	2239.856	1.57	184292	2.36	4000	
Zn	66	1	No Gas	206.995	20699.500	1.64	1165163	2.07	2500	
As	75	1	No Gas	0.027	2.683	645.14	-355	-230.23	4000	
Se	82	1	No Gas	0.063	6.306	318.75	21	335.07	4000	
Sr	88	1	No Gas	12.699	1269.880	0.63	659953	1.82	4000	
Mo	95	1	No Gas	-0.023	-2.270	-13.02	220	15.38	4000	
[Mo]	98	1	No Gas	-0.025	-2.512	-0.60	307	2.17	4000	
Ag	107	1	No Gas	0.011	1.116	9.99	329	10.20	100	
Cd	111	1	No Gas	0.101	10.121	3.15	634	1.32	4000	
[Cd]	114	1	No Gas	0.118	11.806	5.10	1370	4.04	4000	
Sn	118	1	No Gas	-0.039	-3.858	-15.27	1047	8.57	4000	
Sb	123	1	No Gas	0.000	-0.041	-1011.62	1127	7.69	4000	
Ba	137	1	No Gas	8.394	839.425	0.32	77111	1.49	4000	
Ce	140	1	No Gas	2.447	244.707	1.12	202258	1.58	4000	
Tl	205	1	No Gas	0.023	2.268	3.72	1732	2.50	4000	
Pb	208	1	No Gas	0.066	6.562	5.20	6138	4.18	4000	
U	238	1	No Gas	0.020	1.989	2.17	2327	1.80	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	641802	0.62	683598	93.89	60	120	
Sc-45 (IS)	45	1	No Gas	2766301	1.16	2772611	99.77	60	120	
Ge (IS)	72	1	No Gas	655199	1.47	684081	95.78	60	120	
Ge (IS)	74	1	No Gas	921277	1.34	962934	95.67	60	120	
In-115 (IS)	115	1	No Gas	5151329	1.57	5418737	95.07	60	120	
Tb-159 (IS)	159	1	No Gas	7750989	0.14	8162763	94.96	60	120	

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22783

Client TETRA TECH Site Name _____ By: _____ (Signature)

Cooler Received on 4-4-13 Opened on 4-4-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF 0°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 4G	(CF +1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 5G	(CF +1 °C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 8	(CF +1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C

☐ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 EA	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM JWM Date 4/4/13 by TB via Verbal (Voice Mail) Other

Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

MRC-MW70B-040313 COC = Total Metals, Rec'd 2e for 1,4-Dioxane, no metals bottle - will log for 1,4-Dioxane, not metals

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ -were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
	pH Strip Lot# HC256691		
1132	<2	4-4-13	TLS
1257	<2	"	"
1440	<2	"	"
1539	<2 <2 <2	"	"
1055	<2 <2 <2	"	"
1240	<2	"	"
1405	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client cooler	0.2	1.2	5G	ICE
Client cooler	0.0	1.0	5G	ICE

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22783-1

Login Number: 22783
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/05/13 01:04 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22783-1

Login Number: 22783
List Number: 2
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/05/13 01:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-22783-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW--68A-040313	240-22783-5	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW--67A-040313	240-22783-4	NM	4/3/2013	4/19/2013	4/19/2013	16	0	16
HG	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/23/2013	4/23/2013	20	0	20
HG	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/9/2013	4/10/2013	6	1	7
M	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW--67A-040313	240-22783-4	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW--68A-040313	240-22783-5	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/17/2013	4/18/2013	14	1	15
M	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/9/2013	4/11/2013	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/11/2013	4/11/2013	8	0	8
CL	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
DOC	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/12/2013	4/12/2013	9	0	9
NH3	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/11/2013	4/11/2013	8	0	8
NTA	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
NTI	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
OPO4	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
PCS	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/5/2013	4/5/2013	2	0	2
SO4	MG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/4/2013	4/4/2013	1	0	1
OS	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW70B-040313	240-22783-9	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OS	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/9/2013	4/12/2013	6	3	9
OV	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	TB-040313	240-22783-1	NM	4/3/2013	4/9/2013	4/9/2013	6	0	6
OV	UG/L	MRC-MW--71B-040313	240-22783-2	NM	4/3/2013	4/9/2013	4/9/2013	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW--71A-040313	240-22783-3	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	MRC-MW70B-040313	240-22783-9	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	MRC-MW63A-040313	240-22783-7	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
OV	UG/L	MRC-MW70A-040313	240-22783-8	NM	4/3/2013	4/10/2013	4/10/2013	7	0	7
ETHA	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5
ETHE	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5
METH	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5
OVG	UG/L	MRC-MW12B-040313	240-22783-6	NM	4/3/2013	4/8/2013	4/8/2013	5	0	5

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22783-1

SDG No.:

Instrument ID: I9 Date: 04/04/2013 11:44

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-22783-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22783-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-81088/1-A	04/09/2013 08:09	81088		50	50
LCS 240-81088/2-A	04/09/2013 08:09	81088		50	50
240-22732-I-7-B MS	04/09/2013 08:09	81088		50	50
240-22732-I-7-C MSD	04/09/2013 08:09	81088		50	50
240-22783-6	04/09/2013 08:09	81088		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-81088/1-A

Instrument Code: I9 Batch No.: 81543

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	206	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	43.0	J		6010C
7439-96-5	Manganese	0.631	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22732-I-7-B MS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	160000		110000		50000	98	75-125		6010C
Iron	4330		3400		1000	97	75-125		6010C
Potassium	52400		2800	J	50000	99	75-125		6010C
Magnesium	50700		1400	J	50000	99	75-125		6010C
Manganese	677		190		500	97	75-125		6010C
Sodium	150000		100000		50000	96	75-125		6010C
SiO2, Silica	8160		5700		2140	116	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22732-I-7-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	156000		50000	90	75-125	3	20		6010C
Iron	4300		1000	93	75-125	1	20		6010C
Potassium	52200		50000	99	75-125	0	20		6010C
Magnesium	50600		50000	98	75-125	0	20		6010C
Manganese	664		500	95	75-125	2	20		6010C
Sodium	145000		50000	85	75-125	4	20		6010C
SiO2, Silica	8030		2140	110	75-125	2	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-81088/2-A

Lab Name: TestAmerica Canton Job No.: 240-22783-1

Sample Matrix: Water LCS Source: MTICP2A_00025

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	49900		100	80	120		6010C
Iron	1000	984		98	80	120		6010C
Potassium	50000	47800		96	80	120		6010C
Magnesium	50000	48700		97	80	120		6010C
Manganese	500	470		94	80	120		6010C
Sodium	50000	48000		96	80	120		6010C
SiO2, Silica	2140	2250		105	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22732-I-7-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-22783-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	110000		111000		0.19		6010C
Iron	3400		3360		NC		6010C
Potassium	2800	J	2360	J	NC		6010C
Magnesium	1400	J	1430	J	NC		6010C
Manganese	190		193		0.53		6010C
Sodium	100000		102000		0.01		6010C
SiO2, Silica	5700		5400		4.9		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98850/1-A	04/17/2013 13:45	98850		50	50
LCS 440-98850/2-A	04/17/2013 13:45	98850		50	50
240-22783-5	04/17/2013 13:45	98850		50	50
240-22783-5 MS	04/17/2013 13:45	98850		50	50
240-22783-5 MSD	04/17/2013 13:45	98850		50	50
240-22783-2	04/17/2013 13:45	98850		50	50
240-22783-3	04/17/2013 13:45	98850		50	50
240-22783-4	04/17/2013 13:45	98850		50	50
240-22783-6	04/17/2013 13:45	98850		50	50
240-22783-7	04/17/2013 13:45	98850		50	50
240-22783-8	04/17/2013 13:45	98850		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98850/1-A

Instrument Code: ICPMS5 Batch No.: 99213

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	0.320	J		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	0.185	J		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW--68A-040313 MS
Lab ID: 240-22783-5 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22783-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.5		2.0	U	80.0	99	75-125		6020
Arsenic	80.5		5.0	U	80.0	101	75-125		6020
Beryllium	392		280		80.0	142	75-125	F	6020
Cadmium	84.5		9.4		80.0	94	75-125		6020
Barium	2630		2500		80.0	144	75-125	4	6020
Chromium	77.1		2.0	U	80.0	96	75-125		6020
Copper	206		120		80.0	102	75-125		6020
Nickel	5970		6200		80.0	-317	75-125	4	6020
Lead	69.7		0.83	J	80.0	86	75-125		6020
Selenium	76.7		3.1	J	80.0	92	75-125		6020
Cobalt	1470		1300		80.0	160	75-125	4	6020
Silver	78.0		0.90	J	80.0	96	75-125		6020
Thallium	71.1		0.42	J	80.0	88	75-125		6020
Zinc	7830		7800		80.0	-23	75-125	4	6020
Molybdenum	84.5		0.29	J	80.0	105	75-125		6020
Vanadium	79.6		20	U	80.0	100	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW--68A-040313 MSD
Lab ID: 240-22783-5 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22783-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	78.2		80.0	98	75-125	2	20		6020
Arsenic	81.4		80.0	102	75-125	1	20		6020
Beryllium	390		80.0	139	75-125	1	20	F	6020
Cadmium	84.0		80.0	93	75-125	1	20		6020
Barium	2590		80.0	96	75-125	1	20	4	6020
Chromium	76.3		80.0	95	75-125	1	20		6020
Copper	200		80.0	94	75-125	3	20		6020
Nickel	5880		80.0	-429	75-125	2	20	4	6020
Lead	69.5		80.0	86	75-125	0	20		6020
Selenium	76.0		80.0	91	75-125	1	20		6020
Cobalt	1420		80.0	91	75-125	4	20	4	6020
Silver	76.8		80.0	95	75-125	2	20		6020
Thallium	70.3		80.0	87	75-125	1	20		6020
Zinc	7220		80.0	-780	75-125	8	20	4	6020
Molybdenum	83.2		80.0	104	75-125	2	20		6020
Vanadium	79.8		80.0	100	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW--68A-040313 PDS | Lab ID: 240-22783-5 PDS

Lab Name: TestAmerica Irvine | Job No.: 240-22783-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	77.0		2.0	U	80.0	96	75-125		6020
Arsenic	76.7		5.0	U	80.0	96	75-125		6020
Beryllium	356		280		80.0	96	75-125		6020
Cadmium	82.7		9.4		80.0	92	75-125		6020
Barium	2580		2500		80.0	NC	75-125		6020
Chromium	75.4		2.0	U	80.0	94	75-125		6020
Copper	204		120		80.0	99	75-125		6020
Nickel	5790		6200		80.0	NC	75-125		6020
Lead	67.3		0.83	J	80.0	83	75-125		6020
Selenium	71.9		3.1	J	80.0	86	75-125		6020
Cobalt	1440		1300		80.0	NC	75-125		6020
Silver	75.6		0.90	J	80.0	93	75-125		6020
Thallium	69.1		0.42	J	80.0	86	75-125		6020
Zinc	7170		7800		80.0	NC	75-125		6020
Molybdenum	81.9		0.29	J	80.0	102	75-125		6020
Vanadium	78.0		20	U	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-98850/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	79.8		100	80	120		6020
Arsenic	80.0	80.5		101	80	120		6020
Beryllium	80.0	80.4		101	80	120		6020
Cadmium	80.0	78.5		98	80	120		6020
Barium	80.0	79.3		99	80	120		6020
Chromium	80.0	80.4		101	80	120		6020
Copper	80.0	80.1		100	80	120		6020
Nickel	80.0	80.0		100	80	120		6020
Lead	80.0	78.3		98	80	120		6020
Selenium	80.0	80.1		100	80	120		6020
Cobalt	80.0	82.0		103	80	120		6020
Silver	80.0	79.8		100	80	120		6020
Thallium	80.0	79.3		99	80	120		6020
Zinc	80.0	73.3		92	80	120		6020
Molybdenum	80.0	78.9		99	80	120		6020
Vanadium	80.0	81.6		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 440-43871-F-1-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22783-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	12		13.6	J	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	21		21.7	J	3.6		6020
Chromium	1.8	J	10	U	NC		6020
Copper	1.1	J	10	U	NC		6020
Nickel	2.0		4.10	J	NC		6020
Lead	0.26	J	5.0	U	NC		6020
Selenium	3.1	J	4.67	J	NC		6020
Cobalt	0.67	J	1.84	J	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	54		65.4	J	NC		6020
Molybdenum	41		39.5	J	2.9		6020
Vanadium	18	J	18.9	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-81097/1-A	04/09/2013 15:15	81097		100	100
LCS 240-81097/2-A	04/09/2013 15:15	81097		100	100
240-22773-K-1-B MS	04/09/2013 15:15	81097		100	100
240-22773-K-1-C MSD	04/09/2013 15:15	81097		100	100
240-22783-6	04/09/2013 15:15	81097		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-81097/1-A

Instrument Code: H4 Batch No.: 81441

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22773-K-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.00		0.20	U	1.00	100	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22773-K-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.967		1.00	97	69-134	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-81097/2-A

Lab Name: TestAmerica Canton Job No.: 240-22783-1

Sample Matrix: Water LCS Source: MTHGCALW_00350

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.62		92	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-99212/1-A	04/19/2013 10:55	99212		20	20
LCS 440-99212/2-A	04/19/2013 10:55	99212		20	20
240-22783-5	04/19/2013 10:55	99212		20	20
240-22783-5 MS	04/19/2013 10:55	99212		20	20
240-22783-5 MSD	04/19/2013 10:55	99212		20	20
240-22783-2	04/19/2013 10:55	99212		20	20
240-22783-3	04/19/2013 10:55	99212		20	20
240-22783-4	04/19/2013 10:55	99212		20	20
240-22783-8	04/19/2013 10:55	99212		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99212/1-A

Instrument Code: CV-HG2 Batch No.: 99457

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW--68A-040313 MS
Lab ID: 240-22783-5 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22783-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	7.74		0.20	U	8.00	97	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW--68A-040313 MSD
Lab ID: 240-22783-5 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22783-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.95		8.00	99	70-130	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-99212/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00077

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	7.95		99	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-99752/1-A	04/23/2013 11:23	99752		20	20
LCS 440-99752/2-A	04/23/2013 11:23	99752		20	20
240-22783-7	04/23/2013 11:23	99752		20	20
240-22783-7 MS	04/23/2013 11:23	99752		20	20
240-22783-7 MSD	04/23/2013 11:23	99752		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99752/1-A

Instrument Code: CV-HG3 Batch No.: 100049

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW63A-040313 MS
Lab ID: 240-22783-7 MS
Lab Name: TestAmerica Irvine
Job No.: 240-22783-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.19		0.20	U	8.00	102	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW63A-040313 MSD
Lab ID: 240-22783-7 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-22783-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.32		8.00	104	70-130	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-99752/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00078

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.15		102	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 04/10/2013 11:56 End Date: 04/10/2013 14:21

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-81270/1-A			11:56	X
IC 240-81270/2-A			11:58	X
IC 240-81270/3-A			12:00	X
IC 240-81270/4-A			12:02	X
IC 240-81270/5-A			12:04	X
IC 240-81270/6-A			12:06	X
ICV 240-81270/7-A	1		12:08	X
ICB 240-81270/8-A	1		12:10	X
CRA 240-81270/9-A	1		12:13	X
CCVL 240-81270/10-A	1		12:15	X
CCB 240-81270/11-A			12:17	
CCV 240-81270/12-A			12:18	
CCB 240-81270/11-A			12:21	
ZZZZZZ			12:22	
ZZZZZZ			12:24	
ZZZZZZ			12:26	
ZZZZZZ			12:28	
ZZZZZZ			12:30	
ZZZZZZ			12:32	
ZZZZZZ			12:33	
ZZZZZZ			12:36	
ZZZZZZ			12:38	
ZZZZZZ			12:40	
CCV 240-81270/12-A			12:42	
CCB 240-81270/11-A			12:44	
ZZZZZZ			12:46	
ZZZZZZ			12:48	
ZZZZZZ			12:50	
ZZZZZZ			12:52	
ZZZZZZ			12:54	
ZZZZZZ			12:56	
ZZZZZZ			12:59	
ZZZZZZ			13:01	
ZZZZZZ			13:03	
ZZZZZZ			13:05	
CCV 240-81270/12-A	1		13:06	X
CCB 240-81270/11-A	1		13:09	X
ZZZZZZ			13:10	
ZZZZZZ			13:12	
ZZZZZZ			13:15	
ZZZZZZ			13:17	
MB 240-81097/1-A	1	T	13:19	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 04/10/2013 11:56 End Date: 04/10/2013 14:21

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
LCS 240-81097/2-A	1	T	13:20	X
ZZZZZZ			13:22	
240-22773-K-1-B MS	1	T	13:24	X
240-22773-K-1-C MSD	1	T	13:26	X
ZZZZZZ			13:28	
CCV 240-81270/12-A	1		13:30	X
CCB 240-81270/11-A	1		13:32	X
ZZZZZZ			13:33	
ZZZZZZ			13:35	
ZZZZZZ			13:37	
ZZZZZZ			13:39	
ZZZZZZ			13:41	
ZZZZZZ			13:43	
ZZZZZZ			13:45	
ZZZZZZ			13:47	
ZZZZZZ			13:49	
ZZZZZZ			13:51	
CCV 240-81270/12-A	1		13:53	X
CCB 240-81270/11-A	1		13:56	X
240-22783-6	1	T	13:57	X
ZZZZZZ			14:00	
ZZZZZZ			14:01	
ZZZZZZ			14:03	
ZZZZZZ			14:05	
CCV 240-81270/12-A	1		14:08	X
CCB 240-81270/11-A	1		14:10	X
ZZZZZZ			14:12	
ZZZZZZ			14:14	
ZZZZZZ			14:16	
ZZZZZZ			14:18	
CCV 240-81270/12-A			14:19	
CCB 240-81270/11-A			14:21	

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00351

Analyte	ICV 240-81270/7-A 04/10/2013 12:08				CCVL 240-81270/10-A 04/10/2013 12:15				CCV 240-81270/12-A 04/10/2013 13:06			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.67		2.50	107	5.15		5.00	103	5.14		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00351

Analyte	CCV 240-81270/12-A 04/10/2013 13:30				CCV 240-81270/12-A 04/10/2013 13:53				CCV 240-81270/12-A 04/10/2013 14:08			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.15		5.00	103	5.13		5.00	103	5.17		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-81270/8-A 04/10/2013 12:10		CCB 240-81270/11-A 04/10/2013 13:09		CCB 240-81270/11-A 04/10/2013 13:32		CCB 240-81270/11-A 04/10/2013 13:56	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-81270/11-A 04/10/2013 14:10							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-81270/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00351

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.253		126	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/19/2013 13:18 End Date: 04/19/2013 16:44

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-99239/6-A	1		13:18	X
IC 440-99239/7-A	1		13:21	X
IC 440-99239/8-A	1		13:23	X
IC 440-99239/9-A	1		13:25	X
IC 440-99239/10-A	1		13:28	X
IC 440-99239/11-A	1		13:30	X
ICV 440-99239/1-A	1		13:39	X
ICB 440-99239/2-A	1		13:42	X
CRA 440-99239/5-A	1		13:44	X
CCV 440-99239/3-A	1		14:11	X
CCB 440-99239/4-A	1		14:14	X
MB 440-99212/1-A	1	T	14:16	X
LCS 440-99212/2-A	1	T	14:19	X
240-22783-5	1	T	14:21	X
240-22783-5 MS	1	T	14:24	X
240-22783-5 MSD	1	T	14:26	X
240-22783-2	1	T	14:29	X
240-22783-3	1	T	14:31	X
240-22783-4	1	T	14:34	X
240-22783-8	1	T	14:36	X
CCV 440-99239/3-A	1		14:39	X
CCB 440-99239/4-A	1		14:41	X
ZZZZZZ			14:44	
ZZZZZZ			14:46	
ZZZZZZ			14:48	
ZZZZZZ			14:51	
ZZZZZZ			14:53	
ZZZZZZ			14:56	
ZZZZZZ			14:58	
ZZZZZZ			15:01	
ZZZZZZ			15:03	
CCV 440-99239/3-A			15:06	
CCB 440-99239/4-A			15:08	
ZZZZZZ			15:11	
ZZZZZZ			15:13	
ZZZZZZ			15:16	
ZZZZZZ			15:18	
ZZZZZZ			15:21	
ZZZZZZ			15:23	
ZZZZZZ			15:25	
ZZZZZZ			15:28	
ZZZZZZ			15:30	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/19/2013 13:18 End Date: 04/19/2013 16:44

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
CCV 440-99239/3-A			15:33	
CCB 440-99239/4-A			15:35	
ZZZZZZ			15:38	
ZZZZZZ			15:40	
ZZZZZZ			15:43	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:55	
CCV 440-99239/3-A			15:57	
CCB 440-99239/4-A			16:00	
ZZZZZZ			16:02	
ZZZZZZ			16:05	
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
CCV 440-99239/3-A			16:17	
CCB 440-99239/4-A			16:20	
CRA 440-99239/5-A			16:27	
ZZZZZZ			16:30	
ZZZZZZ			16:32	
ZZZZZZ			16:34	
ZZZZZZ			16:37	
CCV 440-99239/3-A			16:39	
CCB 440-99239/4-A			16:42	
CRA 440-99239/5-A	1		16:44	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	ICV 440-99239/1-A 04/19/2013 13:39				CCV 440-99239/3-A 04/19/2013 14:11				CCV 440-99239/3-A 04/19/2013 14:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.98		8.00	100	4.20		4.00	105	4.26		4.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-99239/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.293		147	50-150

Lab Sample ID: CRA 440-99239/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.188	J	94	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99239/2-A 04/19/2013 13:42		CCB 440-99239/4-A 04/19/2013 14:14		CCB 440-99239/4-A 04/19/2013 14:41			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.151	J	0.110	J		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/23/2013 13:37 End Date: 04/23/2013 17:04

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-99796/6-A	1		13:37	X
IC 440-99796/7-A	1		13:40	X
IC 440-99796/8-A	1		13:42	X
IC 440-99796/9-A	1		13:45	X
IC 440-99796/10-A	1		13:47	X
IC 440-99796/11-A	1		13:50	X
ICV 440-99796/1-A	1		13:52	X
ICB 440-99796/2-A	1		13:55	X
CRA 440-99796/5-A	1		13:57	X
CCV 440-99796/3-A	1		14:51	X
CCB 440-99796/4-A	1		14:53	X
MB 440-99752/1-A	1	T	14:56	X
LCS 440-99752/2-A	1	T	14:58	X
240-22783-7	1	T	15:01	X
240-22783-7 MS	1	T	15:03	X
240-22783-7 MSD	1	T	15:05	X
ZZZZZZ			15:08	
ZZZZZZ			15:10	
ZZZZZZ			15:13	
ZZZZZZ			15:15	
CCV 440-99796/3-A	1		15:18	X
CCB 440-99796/4-A	1		15:20	X
ZZZZZZ			15:23	
ZZZZZZ			15:26	
ZZZZZZ			15:28	
ZZZZZZ			15:31	
ZZZZZZ			15:33	
ZZZZZZ			15:36	
ZZZZZZ			15:38	
ZZZZZZ			15:41	
ZZZZZZ			15:43	
ZZZZZZ			15:46	
CCV 440-99796/3-A			15:48	
CCB 440-99796/4-A			15:51	
ZZZZZZ			15:53	
ZZZZZZ			15:56	
ZZZZZZ			15:58	
ZZZZZZ			16:01	
ZZZZZZ			16:03	
ZZZZZZ			16:06	
ZZZZZZ			16:08	
ZZZZZZ			16:11	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 04/23/2013 13:37 End Date: 04/23/2013 17:04

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			16:13	
ZZZZZZ			16:16	
CCV 440-99796/3-A			16:19	
CCB 440-99796/4-A			16:21	
CRA 440-99796/5-A			16:24	
ZZZZZZ			16:26	
ZZZZZZ			16:29	
ZZZZZZ			16:31	
ZZZZZZ			16:34	
ZZZZZZ			16:36	
ZZZZZZ			16:39	
CCV 440-99796/3-A			16:41	
CCB 440-99796/4-A			16:44	
ZZZZZZ			16:46	
ZZZZZZ			16:49	
ZZZZZZ			16:51	
ZZZZZZ			16:54	
ZZZZZZ			16:56	
CCV 440-99796/3-A			16:59	
CCB 440-99796/4-A			17:01	
CRA 440-99796/5-A			17:04	

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

ICV Source: ME 1PPM HG2_00076 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00078

Analyte	ICV 440-99796/1-A 04/23/2013 13:52				CCV 440-99796/3-A 04/23/2013 14:51				CCV 440-99796/3-A 04/23/2013 15:18			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.58		8.00	107	4.26		4.00	107	4.25		4.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-99796/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00078

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.206		103	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99796/2-A 04/23/2013 13:55		CCB 440-99796/4-A 04/23/2013 14:53		CCB 440-99796/4-A 04/23/2013 15:20			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																														
				Ca	Fe	K	Mg	Mn	Na	SiO2																										
ZZZZZZ			10:28																																
CCV 240-81543/42	1		10:32	X	X	X	X	X	X																										
CCB 240-81543/43	1		10:35	X	X	X	X	X	X																										
CCV 240-81543/44	1		10:39							X																									
CCB 240-81543/45	1		10:46							X																									
ZZZZZZ			10:50																																
ZZZZZZ			10:54																																
ZZZZZZ			10:58																																
ZZZZZZ			11:01																																
ZZZZZZ			11:05																																
ZZZZZZ			11:09																																
EMPTY 240-81543/52			11:14																																
CCV 240-81543/53			11:21																																
CCV 240-81543/54			11:25																																
CCB 240-81543/55			11:29																																
ZZZZZZ			11:33																																
ZZZZZZ			11:37																																
ZZZZZZ			11:41																																
ZZZZZZ			11:45																																
ZZZZZZ			11:55																																
ZZZZZZ			11:59																																
ZZZZZZ			12:03																																
ZZZZZZ			12:07																																
ZZZZZZ			12:11																																
ZZZZZZ			12:15																																
CCV 240-81543/66			12:19																																
CCB 240-81543/67			12:23																																
ZZZZZZ			12:27																																
ZZZZZZ			12:31																																
ZZZZZZ			12:35																																
ZZZZZZ			12:39																																
ZZZZZZ			12:43																																
ZZZZZZ			12:47																																
ZZZZZZ			12:51																																
ZZZZZZ			12:55																																
ZZZZZZ			12:59																																
ZZZZZZ			13:03																																
CCV 240-81543/78			13:08																																
CCB 240-81543/79			13:11																																
ZZZZZZ			13:15																																

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																														
				Ca	Fe	K	Mg	Mn	Na	SiO2																										
ZZZZZZ			13:19																															
ZZZZZZ			13:23																															
ZZZZZZ			13:27																															
ZZZZZZ			13:31																															
ZZZZZZ			13:35																															
ZZZZZZ			13:39																															
ZZZZZZ			13:43																															
ZZZZZZ			13:46																															
ZZZZZZ			13:50																															
CCV 240-81543/90			13:54																															
CCB 240-81543/91			13:58																															
ZZZZZZ			14:02																															
ZZZZZZ			14:06																															
ZZZZZZ			14:09																															
ZZZZZZ			14:13																															
ZZZZZZ			14:17																															
ZZZZZZ			14:21																															
ZZZZZZ			14:25																															
ZZZZZZ			14:30																															
ZZZZZZ			14:34																															
ZZZZZZ			14:38																															
CCV 240-81543/102			14:42																															
CCB 240-81543/103			14:46																															
ZZZZZZ			14:50																															
ZZZZZZ			14:54																															
ZZZZZZ			14:58																															
ZZZZZZ			15:03																															
ZZZZZZ			15:07																															
ZZZZZZ			15:11																															
ZZZZZZ			15:15																															
ZZZZZZ			15:19																															
ZZZZZZ			15:23																															
ZZZZZZ			15:26																															
CCV 240-81543/114			15:30																															
CCB 240-81543/115			15:34																															
ZZZZZZ			16:17																															
ZZZZZZ			16:20																															
ZZZZZZ			16:24																															
ZZZZZZ			16:29																															
ZZZZZZ			16:33																															

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																																
				Ca	Fe	K	Mg	Mn	Na	SiO2																												
ZZZZZZ			16:38																																		
ZZZZZZ			16:42																																		
ZZZZZZ			16:46																																		
ZZZZZZ			16:50																																		
ZZZZZZ			16:55																																		
CCV 240-81543/126			16:59																																		
CCB 240-81543/127			17:02																																		
ZZZZZZ			17:06																																		
ZZZZZZ			17:10																																		
ZZZZZZ			17:14																																		
ZZZZZZ			17:18																																		
ZZZZZZ			17:22																																		
ZZZZZZ			17:26																																		
ZZZZZZ			17:30																																		
ZZZZZZ			17:34																																		
ZZZZZZ			17:38																																		
ZZZZZZ			17:42																																		
CCV 240-81543/138			17:47																																		
CCB 240-81543/139			17:51																																		
ZZZZZZ			17:54																																		
ZZZZZZ			17:58																																		
ZZZZZZ			18:02																																		
ZZZZZZ			18:06																																		
ZZZZZZ			18:10																																		
ZZZZZZ			18:14																																		
ZZZZZZ			18:18																																		
ZZZZZZ			18:22																																		
ZZZZZZ			18:26																																		
ZZZZZZ			18:29																																		
CCV 240-81543/150			18:33																																		
CCB 240-81543/151			18:37																																		
ZZZZZZ			18:41																																		
ZZZZZZ			18:45																																		
ZZZZZZ			18:49																																		
ZZZZZZ			18:53																																		
ZZZZZZ			18:56																																		
ZZZZZZ			19:00																																		
ZZZZZZ			19:04																																		
ZZZZZZ			19:08																																		
ZZZZZZ			19:12																																		

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ca	Fe	K	Mg	Mn	Na	SiO2																								
ZZZZZZ			19:16																														
CCV 240-81543/162			19:20																														
CCB 240-81543/163			19:23																														
ZZZZZZ			19:27																														
ZZZZZZ			19:31																														
ZZZZZZ			19:35																														
ZZZZZZ			19:39																														
ZZZZZZ			19:43																														
ZZZZZZ			19:47																														
ZZZZZZ			19:51																														
ZZZZZZ			19:55																														
ZZZZZZ			19:58																														
ZZZZZZ			20:02																														
CCV 240-81543/174			20:06																														
CCB 240-81543/175			20:10																														
ZZZZZZ			20:14																														
ZZZZZZ			20:18																														
ZZZZZZ			20:22																														
ZZZZZZ			20:25																														
ZZZZZZ			20:29																														
ZZZZZZ			20:33																														
ZZZZZZ			20:37																														
ZZZZZZ			20:41																														
ZZZZZZ			20:45																														
ZZZZZZ			20:49																														
CCV 240-81543/186			20:53																														
CCB 240-81543/187			20:57																														
ZZZZZZ			21:01																														
ZZZZZZ			21:05																														
ZZZZZZ			21:08																														
ZZZZZZ			21:12																														
ZZZZZZ			21:16																														
ZZZZZZ			21:20																														
ZZZZZZ			21:24																														
ZZZZZZ			21:28																														
ZZZZZZ			21:32																														
ZZZZZZ			21:37																														
CCV 240-81543/198			21:42																														
CCB 240-81543/199			21:45																														
ZZZZZZ			21:49																														

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/11/2013 06:59 End Date: 04/11/2013 22:30

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			21:54																													
ZZZZZZ			21:58																													
ZZZZZZ			22:03																													
ZZZZZZ			22:07																													
ZZZZZZ			22:11																													
ZZZZZZ			22:15																													
ZZZZZZ			22:19																													
ZZZZZZ			22:23																													
CCV 240-81543/209			22:27																													
CCB 240-81543/210			22:30																													

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	ICV 240-81543/4 04/11/2013 07:12				CCV 240-81543/18 04/11/2013 08:06				CCV 240-81543/30 04/11/2013 09:45			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25500		25000	102	51800		50000	104	52300		50000	105
Iron	12600		12500	101	24700		25000	99	25000		25000	100
Magnesium	24900		25000	100	50400		50000	101	51100		50000	102
Manganese	1510		1500	101	1910		2000	95	1930		2000	96
Potassium	24700		25000	99	49800		50000	100	50100		50000	100
Sodium	24900		25000	100	49900		50000	100	50200		50000	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MT6500CCV_00025

Analyte	CCV 240-81543/42 04/11/2013 10:32											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	52700		50000	105								
Iron	25100		25000	100								
Magnesium	51700		50000	103								
Manganese	1930		2000	96								
Potassium	50300		50000	101								
Sodium	50300		50000	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MTSiCCV_00001

Analyte	ICV 240-81543/4 04/11/2013 07:12				CCV 240-81543/20 04/11/2013 08:52				CCV 240-81543/29 04/11/2013 09:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	6920		6420	108	11100		10700	104	10900		10700	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

ICV Source: MT6500ICV_00009 Concentration Units: ug/L

CCV Source: MTSiCCV_00001

Analyte	CCV 240-81543/44 04/11/2013 10:39											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	10900		10700	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-81543/23 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5100		102	70-130
Iron	200	201		101	70-130
Potassium	5000	4790	J	96	70-130
Magnesium	5000	5120		102	70-130
Manganese	15.0	14.7	J	98	70-130
Sodium	5000	4970	J	99	70-130

Lab Sample ID: CRI 240-81543/38 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1150		107	70-130

Lab Sample ID: CRI 240-81543/39 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00009

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5160		103	70-130
Iron	200	203		101	70-130
Potassium	5000	4860	J	97	70-130
Magnesium	5000	5220		104	70-130
Manganese	15.0	14.7	J	98	70-130
Sodium	5000	5020		100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-81543/5 04/11/2013 07:15		CCB 240-81543/19 04/11/2013 08:10		CCB 240-81543/21 04/11/2013 08:56		CCB 240-81543/31 04/11/2013 09:49	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U			5000	U
Iron	200	200	U	200	U			200	U
Magnesium	5000	5000	U	5000	U			5000	U
Manganese	15	15	U	15	U			15	U
Potassium	5000	5000	U	5000	U			5000	U
SiO2, Silica	1100	1100	U			1100	U	1100	U
Sodium	5000	5000	U	5000	U			5000	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-81543/43 04/11/2013 10:35		CCB 240-81543/45 04/11/2013 10:46					
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U						
Iron	200	200	U						
Magnesium	5000	5000	U						
Manganese	15	15	U						
Potassium	5000	5000	U						
SiO2, Silica	1100			1100	U				
Sodium	5000	5000	U						

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICSA 240-81543/8 Instrument ID: I9

Lab File ID: I9041113A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**500000**	**488130**	**98**
Iron	**200000**	**189670**	**95**
Magnesium	**500000**	**503100**	**101**
Manganese		**2.84**	
Potassium		**-83.2**	
Sodium		**45.5**	
Aluminum	*500000*	*517120*	*103*
Antimony		*-2.48*	
Arsenic		*-1.91*	
Barium		*0.0885*	
Beryllium		*-0.458*	
Boron		*1.25*	
Cadmium		*1.10*	
Chromium		*2.91*	
Cobalt		*-1.63*	
Copper		*0.359*	
Lead		*-0.411*	
Lithium		*-45.9*	
Molybdenum		*-2.04*	
Nickel		*-0.271*	
Selenium		*3.14*	
Silicon		*-20.3*	
Silver		*0.106*	
Strontium		*7.14*	
Thallium		*-0.113*	
Tin		*7.39*	
Titanium		*-0.641*	
Vanadium		*-2.55*	
Zinc		*10.1*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICSAB 240-81543/9 Instrument ID: I9

Lab File ID: I9041113A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Calcium	**500000**	**479310**	**96**
Iron	**200000**	**187750**	**94**
Magnesium	**500000**	**496570**	**99**
Manganese	**500**	**483**	**97**
Potassium	**10000**	**10110**	**101**
Sodium	**10000**	**10296**	**103**
Aluminum	*500000*	*507590*	*102*
Antimony	*1000*	*996*	*100*
Arsenic	*1000*	*1008*	*101*
Barium	*500*	*491*	*98*
Beryllium	*500*	*493*	*99*
Boron	*500*	*504*	*101*
Cadmium	*1000*	*1002*	*100*
Chromium	*500*	*474*	*95*
Cobalt	*500*	*479*	*96*
Copper	*500*	*515*	*103*
Lead	*1000*	*894*	*89*
Lithium	*500*	*476*	*95*
Molybdenum	*1000*	*966*	*97*
Nickel	*1000*	*952*	*95*
Selenium	*1000*	*1006*	*101*
Silicon	*10000*	*9807*	*98*
Silver	*1000*	*1074*	*107*
Strontium	*1500*	*1441*	*96*
Thallium	*1000*	*938*	*94*
Tin	*500*	*512*	*102*
Titanium	*500*	*508*	*102*
Vanadium	*500*	*484*	*97*
Zinc	*1000*	*971*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/18/2013 08:56 End Date: 04/18/2013 15:44

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/18/2013 08:56 End Date: 04/18/2013 15:44

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn											
ZZZZZZ			15:30																											
ZZZZZZ			15:33																											
ZZZZZZ			15:35																											
ZZZZZZ			15:37																											
440-43871-F-1-A SD ^5	5	R	15:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCV 440-99213/48	1		15:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
CCB 440-99213/49	1		15:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-99213/6 04/18/2013 09:08				CCV 440-99213/12 04/18/2013 13:12				CCV 440-99213/24 04/18/2013 13:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.3		25.0	93	47.5		50.0	95	48.0		50.0	96
Arsenic	26.8		25.0	107	49.7		50.0	99	50.3		50.0	101
Barium	26.0		25.0	104	49.0		50.0	98	49.6		50.0	99
Beryllium	25.5		25.0	102	49.3		50.0	99	48.8		50.0	98
Cadmium	26.0		25.0	104	48.3		50.0	97	49.1		50.0	98
Chromium	27.2		25.0	109	51.0		50.0	102	50.8		50.0	102
Cobalt	26.5		25.0	106	51.4		50.0	103	51.0		50.0	102
Copper	26.5		25.0	106	50.4		50.0	101	49.9		50.0	100
Lead	25.6		25.0	102	47.4		50.0	95	48.0		50.0	96
Molybdenum	26.4		25.0	106	48.8		50.0	98	48.9		50.0	98
Nickel	27.1		25.0	108	51.3		50.0	103	50.6		50.0	101
Selenium	26.3		25.0	105	49.4		50.0	99	48.3		50.0	97
Silver	25.5		25.0	102	48.5		50.0	97	48.6		50.0	97
Thallium	26.5		25.0	106	49.4		50.0	99	49.6		50.0	99
Vanadium	26.9		25.0	108	51.3		50.0	103	51.3		50.0	103
Zinc	26.9		25.0	107	46.4		50.0	93	47.1		50.0	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	CCV 440-99213/26 04/18/2013 14:44				CCV 440-99213/38 04/18/2013 15:15				CCV 440-99213/48 04/18/2013 15:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	47.3		50.0	95	46.8		50.0	94	48.9		50.0	98
Arsenic	49.5		50.0	99	50.1		50.0	100	50.7		50.0	101
Barium	49.0		50.0	98	48.4		50.0	97	50.1		50.0	100
Beryllium	48.8		50.0	98	50.2		50.0	100	51.4		50.0	103
Cadmium	47.7		50.0	95	48.4		50.0	97	49.3		50.0	99
Chromium	50.1		50.0	100	50.1		50.0	100	51.7		50.0	103
Cobalt	50.5		50.0	101	51.4		50.0	103	51.9		50.0	104
Copper	49.6		50.0	99	49.5		50.0	99	51.0		50.0	102
Lead	47.2		50.0	94	46.3		50.0	93	49.0		50.0	98
Molybdenum	48.2		50.0	96	49.6		50.0	99	50.2		50.0	100
Nickel	49.7		50.0	99	50.9		50.0	102	50.7		50.0	101
Selenium	49.4		50.0	99	49.4		50.0	99	50.4		50.0	101
Silver	47.9		50.0	96	48.8		50.0	98	50.0		50.0	100
Thallium	49.4		50.0	99	48.5		50.0	97	50.8		50.0	102
Vanadium	51.1		50.0	102	51.5		50.0	103	52.5		50.0	105
Zinc	45.8		50.0	92	47.8		50.0	96	53.3		50.0	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99213/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.10	J	110	50-150
Arsenic	1.00	1.07		107	50-150
Beryllium	0.500	0.498	J	100	50-150
Cadmium	0.500	0.508	J	102	50-150
Barium	1.00	1.03		103	50-150
Chromium	1.00	1.07	J	107	50-150
Copper	1.00	0.863	J	86	50-150
Nickel	1.00	1.07	J	107	50-150
Lead	1.00	1.02		102	50-150
Selenium	1.00	1.13	J	113	50-150
Cobalt	0.500	0.549	J	110	50-150
Silver	1.00	1.03		103	50-150
Thallium	1.00	1.06		106	50-150
Zinc	5.00	10.5	J	210	50-150
Molybdenum	1.00	1.02	J	102	50-150
Vanadium	2.00	2.28		114	50-150

Lab Sample ID: CRI 440-99213/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.08		104	50-150
Arsenic	2.00	2.17		109	50-150
Beryllium	1.00	1.00		100	50-150
Cadmium	1.00	1.05		105	50-150
Barium	2.00	2.10		105	50-150
Chromium	2.00	2.09		104	50-150
Copper	2.00	2.13		106	50-150
Nickel	2.00	2.26		113	50-150
Lead	2.00	2.04		102	50-150
Selenium	2.00	2.24		112	50-150
Cobalt	1.00	1.06		106	50-150
Silver	2.00	2.07		104	50-150
Thallium	2.00	2.08		104	50-150
Zinc	10.0	14.9	J	149	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99213/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.05		103	50-150
Vanadium	4.00	4.39		110	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99213/7 04/18/2013 09:10		CCB 440-99213/13 04/18/2013 13:15		CCB 440-99213/25 04/18/2013 13:42		CCB 440-99213/27 04/18/2013 14:47	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.408	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	0.477	J	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	0.285	J	0.346	J	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	1.01	J	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-99213/39 04/18/2013 15:17		CCB 440-99213/49 04/18/2013 15:44					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U				
Arsenic	1.0	1.0	U	1.0	U				
Barium	1.0	1.0	U	1.0	U				
Beryllium	0.50	0.50	U	0.50	U				
Cadmium	1.0	1.0	U	1.0	U				
Chromium	2.0	2.0	U	2.0	U				
Cobalt	1.0	0.742	J	0.151	J				
Copper	2.0	2.0	U	2.0	U				
Lead	1.0	1.0	U	1.0	U				
Molybdenum	2.0	2.0	U	2.0	U				
Nickel	2.0	1.21	J	2.0	U				
Selenium	2.0	2.0	U	2.0	U				
Silver	1.0	1.0	U	1.0	U				
Thallium	1.0	1.0	U	1.0	U				
Vanadium	2.0	2.0	U	2.0	U				
Zinc	20	20	U	20	U				

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICSA 440-99213/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True	Found	
	Solution A	Solution A	Percent Recovery
Antimony		**0.339**	
Arsenic		**0.0790**	
Barium		**0.223**	
Beryllium		**0.0300**	
Cadmium		**0.958**	
Chromium		**1.39**	
Cobalt		**0.109**	
Copper		**0.662**	
Lead		**0.138**	
Molybdenum	**2000**	**2074**	**104**
Nickel		**0.981**	
Selenium		**-0.206**	
Silver		**0.0850**	
Thallium		**0.0430**	
Vanadium		**0.256**	
Zinc		**9.13**	
Aluminum	*100000*	*91559*	*92*
Calcium	*100000*	*93640*	*94*
Cerium		*0.0570*	
Iron	*100000*	*95901*	*96*
Magnesium	*100000*	*95642*	*96*
Manganese		*0.175*	
Potassium	*100000*	*96602*	*97*
Sodium	*100000*	*96007*	*96*
Sr		*4.98*	
Tin		*0.0960*	
Uranium		*0.0300*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

Lab Sample ID: ICSAB 440-99213/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.7**	**104**
Arsenic	**20.0**	**20.5**	**103**
Barium	**20.0**	**21.3**	**106**
Beryllium	**20.0**	**20.4**	**102**
Cadmium	**20.0**	**20.2**	**101**
Chromium	**20.0**	**20.9**	**105**
Cobalt	**20.0**	**19.5**	**98**
Copper	**20.0**	**19.4**	**97**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2120**	**105**
Nickel	**20.0**	**19.6**	**98**
Selenium	**20.0**	**19.1**	**96**
Silver	**20.0**	**19.5**	**97**
Thallium	**20.0**	**19.3**	**96**
Vanadium	**20.0**	**20.6**	**103**
Zinc	**20.0**	**26.5**	**132**
Aluminum	*100000*	*92816*	*93*
Calcium	*101000*	*96212*	*95*
Cerium	*20.0*	*21.2*	*106*
Iron	*100000*	*97668*	*97*
Magnesium	*101000*	*96777*	*96*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*98171*	*98*
Sodium	*101000*	*98075*	*98*
Sr	*20.0*	*26.7*	*134*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*20.6*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/18/2013 End Date: 04/18/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-99213/1 IC	08:56	100		100		100		100		100	
STD1 440-99213/2 IC	08:59	101		100		101		101		100	
STD2 440-99213/3 IC	09:01	94		93		92		92		92	
STD3 440-99213/4 IC	09:04	93		91		91		91		91	
STD4 440-99213/5 IC	09:06	92		91		90		89		89	
ICV 440-99213/6	09:08	99		97		97		98		98	
ICB 440-99213/7	09:10	91		89		88		89		89	
CRI 440-99213/8	09:13	99		98		99		99		100	
CRI 440-99213/9	09:15	91		90		89		89		89	
ICSA 440-99213/10	09:18	84		90		85		83		83	
ICSAB 440-99213/11	09:20	84		90		86		84		83	
CCV 440-99213/12	13:12	91		95		94		94		95	
CCB 440-99213/13	13:15	90		95		94		93		93	
MB 440-98850/1-A	13:17	90		94		94		94		95	
LCS 440-98850/2-A	13:19	90		95		93		93		93	
240-22783-5	13:21	68		98		89		89		86	
240-22783-5 MS	13:24	70		98		91		91		86	
240-22783-5 MSD	13:26	71		101		91		92		87	
240-22783-5 PDS	13:28	77		100		93		92		87	
240-22783-5	13:30	94		99		95		95		95	
240-22783-5 MS	13:33	92		95		92		92		93	
240-22783-5 MSD	13:35	92		94		92		92		94	
240-22783-5 PDS	13:37	91		93		92		91		92	
CCV 440-99213/24	13:40	91		93		90		91		92	
CCB 440-99213/25	13:42	90		92		90		90		92	
CCV 440-99213/26	14:44	89		92		90		91		93	
CCB 440-99213/27	14:47	88		92		90		90		92	
240-22783-2	14:52	83		89		86		87		88	
240-22783-3	14:54	82		89		86		87		88	
240-22783-4	14:57	67		97		88		87		84	
240-22783-4	14:59	94		100		96		96		95	
240-22783-6	15:01	87		93		91		91		92	
240-22783-7	15:03	86		95		89		90		88	
240-22783-8	15:06	83		93		88		88		88	
CCV 440-99213/38	15:15	102		105		100		101		99	
CCB 440-99213/39	15:17	94		97		94		94		94	
440-43871-F-1-A SD	15:39	88		98		94		93		92	
CCV 440-99213/48	15:42	89		95		93		92		94	
CCB 440-99213/49	15:44	89		94		92		92		93	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22783-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/18/2013 End Date: 04/18/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-99213/1 IC	08:56	100									
STD1 440-99213/2 IC	08:59	102									
STD2 440-99213/3 IC	09:01	94									
STD3 440-99213/4 IC	09:04	92									
STD4 440-99213/5 IC	09:06	92									
ICV 440-99213/6	09:08	99									
ICB 440-99213/7	09:10	90									
CRI 440-99213/8	09:13	102									
CRI 440-99213/9	09:15	92									
ICSA 440-99213/10	09:18	88									
ICSAB 440-99213/11	09:20	88									
CCV 440-99213/12	13:12	95									
CCB 440-99213/13	13:15	94									
MB 440-98850/1-A	13:17	95									
LCS 440-98850/2-A	13:19	94									
240-22783-5	13:21	95									
240-22783-5 MS	13:24	96									
240-22783-5 MSD	13:26	95									
240-22783-5 PDS	13:28	95									
240-22783-5	13:30	94									
240-22783-5 MS	13:33	93									
240-22783-5 MSD	13:35	93									
240-22783-5 PDS	13:37	93									
CCV 440-99213/24	13:40	92									
CCB 440-99213/25	13:42	93									
CCV 440-99213/26	14:44	93									
CCB 440-99213/27	14:47	93									
240-22783-2	14:52	91									
240-22783-3	14:54	91									
240-22783-4	14:57	96									
240-22783-4	14:59	95									
240-22783-6	15:01	93									
240-22783-7	15:03	92									
240-22783-8	15:06	92									
CCV 440-99213/38	15:15	96									
CCB 440-99213/39	15:17	92									
440-43871-F-1-A SD	15:39	93									
CCV 440-99213/48	15:42	93									
CCB 440-99213/49	15:44	94									

FORM XV - IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-22783-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 81734 Batch Start Date: 04/11/13 12:36 Batch Analyst: Burns, Jill

Batch Method: 310.1 Batch End Date: 04/11/13 22:16

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	CalcMsg	FinalAmount	WCALKMSMSD 00006	WCPHENOMINER 00003	
LCS 240-81734/4		310.1		50 mL	BuretStart2 is blank	50 mL		50 mL	
MB 240-81734/5		310.1		50 mL	BuretStart2 is blank	50 mL			
240-22732-J-7 DU		310.1	T	50 mL	BuretStart2 is blank	50 mL			
240-22732-J-7 MS		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-22732-J-7 MSD		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-22783-J-6	MRC-MW12B-040313	310.1	T	50 mL	BuretStart2 is blank	50 mL			

Batch Notes	
pH Buffer 1 ID	880196
pH Buffer 2 ID	934942
pH Buffer 3 ID	925073
Sulfuric Acid Lot Number	922143
Nominal Amount Used	50 mL
Pipette ID	927753
Probe ID	WCP92
Normality of first Titrant	.0203 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 80825 Batch Start Date: 04/05/13 15:00 Batch Analyst: Nicholas, Courtney

Batch Method: 160.1 Batch End Date: 04/09/13 17:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	InitialAmount	TareWeight	Weight1	Weight2	Weight3
MB 240-80825/1		160.1			100 mL	79.4726 g	79.4719 g	79.4723 g	0 g
LCS 240-80825/2		160.1			50 mL	72.6426 g	72.6535 g	72.6537 g	0 g
240-22796-D-2 DU		160.1	T	1590 umhos/cm	50 mL	74.5875 g	74.6460 g	74.6463 g	0 g
240-22783-J-6	MRC-MW12B-040313	160.1	T	166 umhos/cm	100 mL	71.9902 g	71.9986 g	71.9989 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	WCWIBBYSOLIDS 00002	
MB 240-80825/1		160.1		PASS_D	-0.00070 g	-0.00030 g	100 mL		
LCS 240-80825/2		160.1		PASS_D	0.01090 g	0.01110 g	100 mL	50 mL	
240-22796-D-2 DU		160.1	T	PASS_D	0.05850 g	0.05880 g	100 mL		
240-22783-J-6	MRC-MW12B-040313	160.1	T	PASS_D	0.00840 g	0.00870 g	100 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 80825 Batch Start Date: 04/05/13 15:00 Batch Analyst: Nicholas, Courtney

Batch Method: 160.1 Batch End Date: 04/09/13 17:00

Batch Notes	
Balance ID	B044
Batch Comment	Prep [IN 4/5/13, 15:45, Oven4, 99C] [OUT 4/9/13, 09:00, 98C]
Constant Weight (WT2) Date/Time in Oven	4/9/13, 12:55
Constant Weight (WT2) Date/Time Out	4/9/13, 14:15
Constant Weight (WT2) Temp In	182 Celsius
Constant Weight (WT2) Temp Out	181 Celsius
Uncorrected CW (Wt2) Temp In	184 Celsius
Uncorrected CW (Wt2) Temp Out	183 Celsius
Constant Weight (WT3) Date/time In	4/9/13, 15:45
Constant Weight (WT3) Date/Time Out	4/9/13, 16:45
Constant Weight (WT3) Temp In	182 Celsius
Constant Weight (WT3) Temp Out	181 Celsius
Uncorrected CW (Wt3) Temp In	184 Celsius
Uncorrected CW (Wt3) Temp Out	183 Celsius
Filter Paper Lot Number	907869
Date samples were placed in the oven	4/9/13, 09:00
Oven Temp when samples are put in oven	182 Celsius
Nominal Amount Used	100 mL
Date samples were removed from oven	4/9/13, 10:20
Oven Temp when samples removed from oven	181 Celsius
Oven ID	001
Uncorrected In Temperature	184 Celsius
Uncorrected Out Temperature	183 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 78678 Batch Start Date: 03/18/13 15:38 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 03/18/13 19:11

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00097	WCICLCS 00169			
STD1 240-78678/3		300.0		1 mL	0.025 mL				
STD2 240-78678/4		300.0		1 mL	0.125 mL				
STD3 240-78678/5		300.0		1 mL	0.25 mL				
STD4 240-78678/6		300.0		1 mL	0.5 mL				
STD5 240-78678/7		300.0		1 mL	1.25 mL				
STD6 240-78678/8		300.0		1 mL	2 mL				
STD7 240-78678/9		300.0		1 mL	2.5 mL				
STD8 240-78678/10		300.0		1 mL	3.75 mL				
STD9 240-78678/11		300.0		1 mL	5 mL				
ICV 240-78678/13		300.0		1 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 78679 Batch Start Date: 03/18/13 15:38 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 03/18/13 19:11

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00097	WCICLCS 00169			
STD1 240-78679/3		300.0		1 mL	0.025 mL				
STD2 240-78679/4		300.0		1 mL	0.125 mL				
STD3 240-78679/5		300.0		1 mL	0.25 mL				
STD4 240-78679/6		300.0		1 mL	0.5 mL				
STD5 240-78679/7		300.0		1 mL	1.25 mL				
STD6 240-78679/8		300.0		1 mL	2 mL				
STD7 240-78679/9		300.0		1 mL	2.5 mL				
STD8 240-78679/10		300.0		1 mL	3.75 mL				
STD9 240-78679/11		300.0		1 mL	5 mL				
ICV 240-78679/13		300.0		1 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 80670 Batch Start Date: 04/04/13 17:45 Batch Analyst: Burns, Jill

Batch Method: 300.0 Batch End Date: 04/04/13 19:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00258	WCICELUENT 00078	WCICLCS 00174	WCICSOLNA1 00008
CCV 240-80670/3		300.0		5 mL	5 mL	5 mL			
CCB 240-80670/4		300.0		5 mL	5 mL		5 mL		
MB 240-80670/5		300.0		5 mL	5 mL		5 mL		
LCS 240-80670/6		300.0		5 mL	5 mL			5 mL	
240-22783-J-6	MRC-MW12B-040313	300.0	T	5 mL	5 mL				
240-22783-J-6 MS	MRC-MW12B-040313	300.0	T	5 mL	5 mL				0.1 mL
CCV 240-80670/9		300.0		5 mL	5 mL	5 mL			
CCB 240-80670/10		300.0		5 mL	5 mL		5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCICSOLNB1 00008					
CCV 240-80670/3		300.0							
CCB 240-80670/4		300.0							
MB 240-80670/5		300.0							
LCS 240-80670/6		300.0							
240-22783-J-6	MRC-MW12B-040313	300.0	T						
240-22783-J-6 MS	MRC-MW12B-040313	300.0	T	0.1 mL					
CCV 240-80670/9		300.0							
CCB 240-80670/10		300.0							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 80671 Batch Start Date: 04/04/13 17:45 Batch Analyst: Burns, Jill

Batch Method: 300.0 Batch End Date: 04/04/13 19:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00258	WCICELUENT 00078	WCICLCS 00174	WCICSOLNA1 00008
CCV 240-80671/3		300.0		5 mL	5 mL	5 mL			
CCB 240-80671/4		300.0		5 mL	5 mL		5 mL		
MB 240-80671/5		300.0		5 mL	5 mL		5 mL		
LCS 240-80671/6		300.0		5 mL	5 mL			5 mL	
240-22783-J-6	MRC-MW12B-040313	300.0	T	5 mL	5 mL				
240-22783-J-6 MS	MRC-MW12B-040313	300.0	T	5 mL	5 mL				0.1 mL
CCV 240-80671/9		300.0		5 mL	5 mL	5 mL			
CCB 240-80671/10		300.0		5 mL	5 mL		5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCICSOLNB1 00008
CCV 240-80671/3		300.0		
CCB 240-80671/4		300.0		
MB 240-80671/5		300.0		
LCS 240-80671/6		300.0		
240-22783-J-6	MRC-MW12B-040313	300.0	T	
240-22783-J-6 MS	MRC-MW12B-040313	300.0	T	0.1 mL
CCV 240-80671/9		300.0		
CCB 240-80671/10		300.0		

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 81587 Batch Start Date: 04/11/13 10:55 Batch Analyst: Kuhle, Julie

Batch Method: 350.3 Batch End Date: 04/11/13 14:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCNH31000 00020	WCSIMP192-505 00001		
ICV 240-81587/5		350.3		50 mL	50 mL		5 mL		
ICB 240-81587/6		350.3		50 mL	50 mL				
MB 240-81587/7		350.3		50 mL	50 mL				
LCS 240-81587/8		350.3		50 mL	50 mL		5 mL		
240-22783-H-6	MRC-MW12B-040313	350.3	T	50 mL	50 mL				
240-22785-I-1 MS		350.3	T	50 mL	50 mL	0.125 mL			
240-22785-I-1 MSD		350.3	T	50 mL	50 mL	0.125 mL			
CCV 240-81587/17		350.3		50 mL	50 mL	0.125 mL			
CCB 240-81587/18		350.3		50 mL	50 mL				

Batch Notes	
Batch Comment	beakers 905732
Buffer Reagent ID Number	909596
Pipette ID	927762 927753

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Batch Number: 81866 Batch Start Date: 04/12/13 11:22 Batch Analyst: Harshman, Tom

Batch Method: 9060 Batch End Date: 04/12/13 15:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WC LCS 00006	WC TOC CCV 00128		
CCV 240-81866/1		9060		40 mL	40 mL		40 mL		
CCB 240-81866/2		9060		40 mL	40 mL				
MB 240-81866/3		9060		40 mL	40 mL				
LCS 240-81866/4		9060		40 mL	40 mL	40 mL			
240-22680-F-2 MS		9060	D	40 mL	40 mL		20 mL		
240-22783-G-6	MRC-MW12B-040313	9060	D	40 mL	40 mL				
CCV 240-81866/11		9060		40 mL	40 mL		40 mL		
CCB 240-81866/12		9060		40 mL	40 mL				

Batch Notes	
Lot # of Phosphoric Acid	836447
Sodium Persulfate Reagent ID Number	836449

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID:	80825 Date:	04/05/2013 15:00					
160.1	MB 240-80825/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID:	80670 Date:	04/04/2013 18:35					
300.0	MB 240-80670/5	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-80670/5	Sulfate	1.0	U	mg/L	1.0	1
Batch ID:	80671 Date:	04/04/2013 18:35					
300.0	MB 240-80671/5	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80671/5	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-80671/5	Orthophosphate as P	0.50	U ^	mg/L	0.50	1
Batch ID:	81734 Date:	04/11/2013 13:15					
310.1	MB 240-81734/5	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID:	81587 Date:	04/11/2013 10:56					
350.3	MB 240-81587/7	Ammonia (as N)	0.0383	J	mg/L	0.20	1
Batch ID:	81866 Date:	04/12/2013 11:44					
9060	MB 240-81866/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80670	Date: 04/04/2013 19:24										
300.0	240-22783-6	Chloride	7.4		mg/L						
300.0	240-22783-6 MS	Chloride	85.0		mg/L	50.0	155	80-120			F
300.0	240-22783-6	Sulfate	3.8		mg/L						
300.0	240-22783-6 MS	Sulfate	79.2		mg/L	50.0	151	80-120			F
Batch ID: 80671	Date: 04/04/2013 19:24										
300.0	240-22783-6	Nitrite as N	0.10	U	mg/L						
300.0	240-22783-6 MS	Nitrite as N	2.49		mg/L	2.50	100	80-120			
300.0	240-22783-6	Nitrate as N	0.053	J	mg/L						
300.0	240-22783-6 MS	Nitrate as N	3.54		mg/L	2.50	140	80-120			F
300.0	240-22783-6	Orthophosphate as P	0.50	U	mg/L						^
300.0	240-22783-6 MS	Orthophosphate as P	4.53		mg/L	2.50	181	80-120			^ F
Batch ID: 81734	Date: 04/11/2013 16:07										
310.1	240-22732-J-7	Alkalinity	9.9		mg/L						
310.1	240-22732-J-7 MS	Alkalinity	311		mg/L	500	60	10-160			
Batch ID: 81587	Date: 04/11/2013 10:57										
350.3	240-22785-I-1	Ammonia (as N)	0.067	J	mg/L						B
350.3	240-22785-I-1 MS	Ammonia (as N)	2.60		mg/L	2.50	101	75-125			
Batch ID: 81866	Date: 04/12/2013 12:47										
9060	240-22680-F-2	Dissolved Organic Carbon	2.1		mg/L						
9060	240-22680-F-2 MS	Dissolved Organic Carbon	29.6		mg/L	25.0	110	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 81734		Date: 04/11/2013 16:20									
310.1	240-22732-J-7 MSD	Alkalinity	322		mg/L	500	63	10-160	3	24	
Batch ID: 81587		Date: 04/11/2013 11:00									
350.3	240-22785-I-1 MSD	Ammonia (as N)	2.67		mg/L	2.50	104	75-125	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	80825	Date: 04/05/2013 15:00						
160.1		240-22796-D-2	Total Dissolved Solids	1200	mg/L			
160.1		240-22796-D-2 DU	Total Dissolved Solids	1180	mg/L	4	20	
Batch ID:	81734	Date: 04/11/2013 15:48						
310.1		240-22732-J-7	Alkalinity	9.9	mg/L			
310.1		240-22732-J-7 DU	Alkalinity	12.8	mg/L	26	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 80825		Date: 04/05/2013 15:00									
						LCS Source: WCWIBBYSOLIDS_00002					
160.1	LCS 240-80825/2	Total Dissolved Solids	222		mg/L	206	108	88-110			
Batch ID: 80670		Date: 04/04/2013 18:51									
						LCS Source: WCICLCS_00174					
300.0	LCS 240-80670/6	Chloride	50.2		mg/L	50.0	100	90-110			
300.0	LCS 240-80670/6	Sulfate	47.9		mg/L	50.0	96	90-110			
Batch ID: 80671		Date: 04/04/2013 18:51									
						LCS Source: WCICLCS_00174					
300.0	LCS 240-80671/6	Nitrite as N	2.43		mg/L	2.50	97	90-110			
300.0	LCS 240-80671/6	Nitrate as N	2.54		mg/L	2.50	101	90-110			
300.0	LCS 240-80671/6	Orthophosphate as P	2.66		mg/L	2.50	106	90-110			^
Batch ID: 81734		Date: 04/11/2013 13:08									
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-81734/4	Alkalinity	83.8		mg/L	79.5	105	90-127			
Batch ID: 81587		Date: 04/11/2013 10:56									
						LCS Source: WCSIMP192-505_00001					
350.3	LCS 240-81587/8	Ammonia (as N)	9.16		mg/L	8.93	103	85-114			
Batch ID: 81866		Date: 04/12/2013 11:55									
						LCS Source: WC LCS_00006					
9060	LCS 240-81866/4	Dissolved Organic Carbon	50.7		mg/L	48.1	105	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/11/2013 12:36 End Date: 04/11/2013 22:16

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			12:36	
RINSE 240-81734/2			12:45	
ZZZZZZ			13:00	
LCS 240-81734/4	1	T	13:08	X
MB 240-81734/5	1	T	13:15	X
ZZZZZZ			13:18	
ZZZZZZ			15:28	
ZZZZZZ			15:38	
240-22732-J-7 DU	1	T	15:48	X
240-22732-J-7 MS	1	T	16:07	X
240-22732-J-7 MSD	1	T	16:20	X
ZZZZZZ			16:27	
240-22783-6	1	T	16:34	X
ZZZZZZ			16:45	
ZZZZZZ			16:58	
ZZZZZZ			17:09	
ZZZZZZ			17:13	
ZZZZZZ			17:24	
ZZZZZZ			17:36	
ZZZZZZ			17:45	
ZZZZZZ			17:52	
ZZZZZZ			17:59	
ZZZZZZ			18:05	
ZZZZZZ			18:13	
ZZZZZZ			18:21	
ZZZZZZ			18:28	
ZZZZZZ			18:37	
ZZZZZZ			18:41	
ZZZZZZ			18:50	
ZZZZZZ			18:59	
ZZZZZZ			19:08	
ZZZZZZ			19:24	
ZZZZZZ			19:32	
ZZZZZZ			19:38	
ZZZZZZ			19:45	
ZZZZZZ			19:53	
ZZZZZZ			20:08	
ZZZZZZ			20:22	
ZZZZZZ			20:25	
ZZZZZZ			20:32	
ZZZZZZ			20:42	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/11/2013 12:36 End Date: 04/11/2013 22:16

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			20:50	
ZZZZZZ			21:00	
ZZZZZZ			21:08	
ZZZZZZ			21:18	
ZZZZZZ			21:27	
ZZZZZZ			21:35	
ZZZZZZ			21:44	
ZZZZZZ			21:52	
ZZZZZZ			21:55	
ZZZZZZ			22:05	
ZZZZZZ			22:13	
ZZZZZZ			22:16	

Prep Types:
T = Total/NA

FORM XIII-IN

Report Date: 4/12/2013 : 11:33 AM

Instrument ID: Steve

TestAmerica

310.1, 2320B, 305.1, 2310B, 340.2, 4500F-C

Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
rinse-1	4/11/2013	12:36 PM	-1.00	8.87	13.38	47.67	20.91	26.77	.00	-1.00	-1.00
rinse-2	4/11/2013	12:45 PM	-1.00	8.99	5.24	41.70	31.23	10.47	.00	-1.00	-1.00
PH 7	4/11/2013	1:00 PM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
LCS 917872	4/11/2013	1:08 PM	-1.00	8.12	.00	83.81	83.81	.00	.00	-1.00	-1.00
MB	4/11/2013	1:15 PM	-1.00	6.90	.00	1.82	1.82	.00	.00	-1.00	-1.00
PH 7A	4/11/2013	1:18 PM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-22732-j-2	4/11/2013	3:28 PM	-1.00	5.94	.00	14.46	14.46	.00	.00	-1.00	-1.00
240-22732-j-7	4/11/2013	3:38 PM	-1.00	9.42	4.83	9.85	.18	9.66	.00	-1.00	-1.00
DU	4/11/2013	3:48 PM	-1.00	9.84	7.89	12.78	.00	9.79	2.99	-1.00	-1.00
MS	4/11/2013	4:07 PM	-1.00	10.66	149.83	311.38	11.72	299.66	.00	-1.00	-1.00
MSD	4/11/2013	4:20 PM	-1.00	10.68	162.44	322.47	.00	320.07	2.41	-1.00	-1.00
240-22732-k-9	4/11/2013	4:27 PM	-1.00	6.51	.00	56.96	56.96	.00	.00	-1.00	-1.00
240-22783-j-6	4/11/2013	4:34 PM	-1.00	6.96	.00	51.39	51.39	.00	.00	-1.00	-1.00
240-22834-h-2	4/11/2013	4:45 PM	-1.00	7.73	.00	323.84	323.84	.00	.00	-1.00	-1.00
240-22834-h-3	4/11/2013	4:58 PM	-1.00	7.69	.00	336.29	336.29	.00	.00	-1.00	-1.00
240-22834-h-4	4/11/2013	5:09 PM	-1.00	7.83	.00	353.96	353.96	.00	.00	-1.00	-1.00
PH 7-2	4/11/2013	5:13 PM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-22834-h-5	4/11/2013	5:24 PM	-1.00	7.74	.00	308.35	308.35	.00	.00	-1.00	-1.00
240-22834-h-6	4/11/2013	5:36 PM	-1.00	7.88	.00	337.49	337.49	.00	.00	-1.00	-1.00
240-22837-l-1	4/11/2013	5:45 PM	-1.00	8.27	.00	183.46	183.46	.00	.00	-1.00	-1.00
240-22839-f-1	4/11/2013	5:52 PM	-1.00	6.05	.00	102.12	102.12	.00	.00	-1.00	-1.00
DU	4/11/2013	5:59 PM	-1.00	6.05	.00	102.17	102.17	.00	.00	-1.00	-1.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
240-22839-f-2	4/11/2013	6:05 PM	-1.00	6.00	.00	54.94	54.94	.00	.00	-1.00	-1.00
240-22865-c-1	4/11/2013	6:13 PM	-1.00	7.61	.00	49.56	49.56	.00	.00	-1.00	-1.00
240-22865-b-2	4/11/2013	6:21 PM	-1.00	7.52	.00	45.10	45.10	.00	.00	-1.00	-1.00
240-22865-b-3	4/11/2013	6:28 PM	-1.00	7.53	.00	43.45	43.45	.00	.00	-1.00	-1.00
240-22868-d-1	4/11/2013	6:37 PM	-1.00	7.68	.00	188.06	188.06	.00	.00	-1.00	-1.00
PH 7-3	4/11/2013	6:41 PM	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-22868-d-2	4/11/2013	6:50 PM	-1.00	8.06	.00	180.33	180.33	.00	.00	-1.00	-1.00
240-22868-f-3	4/11/2013	6:59 PM	-1.00	7.95	.00	130.98	130.98	.00	.00	-1.00	-1.00
240-22868-f-4	4/11/2013	7:08 PM	-1.00	7.97	.00	190.07	190.07	.00	.00	-1.00	-1.00
240-22868-c-5	4/11/2013	7:24 PM	-1.00	6.89	.00	524.51	524.51	.00	.00	-1.00	-1.00
LCS2	4/11/2013	7:32 PM	-1.00	8.03	.00	82.75	82.75	.00	.00	-1.00	-1.00
MB2	4/11/2013	7:38 PM	-1.00	6.39	.00	1.18	1.18	.00	.00	-1.00	-1.00
240-22868-c-8	4/11/2013	7:45 PM	-1.00	7.42	.00	37.03	37.03	.00	.00	-1.00	-1.00
DU	4/11/2013	7:53 PM	-1.00	7.47	.00	37.91	37.91	.00	.00	-1.00	-1.00
MS	4/11/2013	8:08 PM	-1.00	10.33	190.28	447.48	66.93	380.55	.00	-1.00	-1.00
MSD240-22868-c-8	4/11/2013	8:22 PM	-1.00	10.36	182.32	434.59	69.96	364.63	.00	-1.00	-1.00
PH 7-4	4/11/2013	8:25 PM	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-22868-c-9	4/11/2013	8:32 PM	-1.00	7.53	.00	42.09	42.09	.00	.00	-1.00	-1.00
240-22873-h-1	4/11/2013	8:42 PM	-1.00	6.36	.00	237.65	237.65	.00	.00	-1.00	-1.00
240-22875-g-1	4/11/2013	8:50 PM	-1.00	6.33	.00	146.01	146.01	.00	.00	-1.00	-1.00
240-22941-g-1	4/11/2013	9:00 PM	-1.00	8.06	.00	221.46	221.46	.00	.00	-1.00	-1.00
240-22944-g-1	4/11/2013	9:08 PM	-1.00	7.58	.00	44.90	44.90	.00	.00	-1.00	-1.00
240-22945-i-1	4/11/2013	9:18 PM	-1.00	8.07	.00	211.57	211.57	.00	.00	-1.00	-1.00
240-22945-i-2	4/11/2013	9:27 PM	-1.00	7.72	.00	36.28	36.28	.00	.00	-1.00	-1.00
240-22953-g-1	4/11/2013	9:35 PM	-1.00	6.42	.00	207.64	207.64	.00	.00	-1.00	-1.00
240-22953-g-2	4/11/2013	9:44 PM	-1.00	6.39	.00	160.03	160.03	.00	.00	-1.00	-1.00
DU	4/11/2013	9:52 PM	-1.00	6.39	.00	161.01	161.01	.00	.00	-1.00	-1.00
PH 7-5	4/11/2013	9:55 PM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

Copyright Hinterland Software Ltd.

Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BICarbonate	Carbonate	Hydroxide	Fluoride	Acid
240-22956-j-1	4/11/2013	10:05 PM	-1.00	6.42	.00	209.37	209.37	.00	.00	-1.00	-1.00
240-22956-h-2	4/11/2013	10:13 PM	-1.00	6.23	.00	128.28	128.28	.00	.00	-1.00	-1.00
PH 7-6	4/11/2013	10:16 PM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 03/18/2013 15:38 End Date: 03/18/2013 19:11

Lab Sample Id	D/F	Type	Time	Analytes																											
				CL-	SO4																										
ZZZZZZ			15:38																												
ZZZZZZ			15:55																												
STD1 240-78678/3 IC	1		16:11	X	X																										
STD2 240-78678/4 IC	1		16:27	X	X																										
STD3 240-78678/5 IC	1		16:44	X	X																										
STD4 240-78678/6 IC	1		17:00	X	X																										
STD5 240-78678/7 ICRT	1		17:17	X	X																										
STD6 240-78678/8 IC	1		17:33	X	X																										
STD7 240-78678/9 IC	1		17:49	X	X																										
STD8 240-78678/10 IC	1		18:06	X	X																										
STD9 240-78678/11 IC	1		18:22	X	X																										
ZZZZZZ			18:39																												
ICV 240-78678/13	1		18:55	X	X																										
ICB 240-78678/14			19:11																												

Prep Types:
=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/04/2013 17:45 End Date: 04/04/2013 19:57

Lab Sample Id	D/F	Type	Time	Analytes																													
				CL-	SO4																												
ZZZZZZ			17:45																														
CCV 240-80670/3	1		18:02	X	X																												
CCB 240-80670/4	1		18:18	X	X																												
MB 240-80670/5	1	T	18:35	X	X																												
LCS 240-80670/6	1	T	18:51	X	X																												
240-22783-6	1	T	19:07	X	X																												
240-22783-6 MS	1	T	19:24	X	X																												
CCV 240-80670/9	1		19:40	X	X																												
CCB 240-80670/10	1		19:57	X	X																												

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Analyst: LG Batch Start Date: 03/18/2013

Reporting Units: mg/L Analytical Batch No.: 78678

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	18:55	Chloride	51.8	50.0	104	90-110		WCICLCS_00169
			Sulfate	49.0	50.0	98	90-110		WCICLCS_00169

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Analyst: JB Batch Start Date: 04/04/2013

Reporting Units: mg/L Analytical Batch No.: 80670

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	18:02	Chloride	49.4	50.0	99	90-110		WCICCCV_00258
			Sulfate	47.8	50.0	96	90-110		WCICCCV_00258
4	CCB	18:18	Chloride	1.0				U	
			Sulfate	1.0				U	
9	CCV	19:40	Chloride	49.5	50.0	99	90-110		WCICCCV_00258
			Sulfate	48.0	50.0	96	90-110		WCICCCV_00258
10	CCB	19:57	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 03/18/2013 15:38 End Date: 03/18/2013 19:11

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/04/2013 17:45 End Date: 04/04/2013 19:57

Lab Sample Id	D/F	Type	Time	Analytes																												
				N-No2	NO3	Orthophosasp																											
ZZZZZZ			17:45																													
CCV 240-80671/3	1		18:02	X	X	X																										
CCB 240-80671/4	1		18:18	X	X	X																										
MB 240-80671/5	1	T	18:35	X	X	X																										
LCS 240-80671/6	1	T	18:51	X	X	X																										
240-22783-6	1	T	19:07	X	X	X																										
240-22783-6 MS	1	T	19:24	X	X	X																										
CCV 240-80671/9	1		19:40	X	X	X																										
CCB 240-80671/10	1		19:57	X	X	X																										

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Analyst: LG Batch Start Date: 03/18/2013

Reporting Units: mg/L Analytical Batch No.: 78679

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	18:55	Nitrite as N	2.44	2.50	98	90-110		WCICLCS_00169
			Nitrate as N	2.56	2.50	102	90-110		WCICLCS_00169
			Orthophosphate as P	2.58	2.50	103	90-110		WCICLCS_00169

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Analyst: JB Batch Start Date: 04/04/2013

Reporting Units: mg/L Analytical Batch No.: 80671

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	18:02	Nitrite as N	2.44	2.50	98	90-110		WCICCCV_00258
			Nitrate as N	2.44	2.50	98	90-110		WCICCCV_00258
			Orthophosphate as P	2.54	2.50	102	90-110		WCICCCV_00258
4	CCB	18:18	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
9	CCV	19:40	Nitrite as N	2.42	2.50	97	90-110		WCICCCV_00258
			Nitrate as N	2.46	2.50	98	90-110		WCICCCV_00258
			Orthophosphate as P	2.83	2.50	113	90-110		WCICCCV_00258
10	CCB	19:57	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/11/2013 10:55 End Date: 04/11/2013 14:06

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
IC 240-81587/1			10:55	X
IC 240-81587/2			10:55	X
IC 240-81587/3			10:55	X
IC 240-81587/4			10:55	X
ICV 240-81587/5	10		10:55	X
ICB 240-81587/6	1		10:55	X
MB 240-81587/7	1	T	10:56	X
LCS 240-81587/8	10	T	10:56	X
ZZZZZZ			10:56	
ZZZZZZ			10:56	
240-22783-6	1	T	10:56	X
ZZZZZZ			10:56	
ZZZZZZ			10:56	
ZZZZZZ			10:56	
240-22785-I-1 MS	1	T	10:57	X
240-22785-I-1 MSD	1	T	11:00	X
CCV 240-81587/17	1		11:02	X
CCB 240-81587/18	1		12:57	X
ZZZZZZ			12:57	
ZZZZZZ			12:57	
ZZZZZZ			12:57	
ZZZZZZ			12:57	
ZZZZZZ			12:57	
ZZZZZZ			12:57	
ZZZZZZ			12:58	
ZZZZZZ			12:58	
ZZZZZZ			13:32	
ZZZZZZ			13:33	
CCV 240-81587/29			13:33	
CCB 240-81587/30			13:33	
ZZZZZZ			14:00	
ZZZZZZ			14:00	
ZZZZZZ			14:00	
ZZZZZZ			14:00	
CCV 240-81587/35			14:00	
CCB 240-81587/36			14:06	

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Analyst: JK Batch Start Date: 04/11/2013

Reporting Units: mg/L Analytical Batch No.: 81587

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	10:55	Ammonia (as N)	9.51	8.93	107	90-110		WCSIMP192-505_00001
6	ICB	10:55	Ammonia (as N)	0.0455				J	
17	CCV	11:02	Ammonia (as N)	2.45	2.50	98	90-110		WCNH31000_00020
18	CCB	12:57	Ammonia (as N)	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/12/2013 11:22 End Date: 04/12/2013 15:54

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-81866/1	1		11:22	X
CCB 240-81866/2	1		11:33	X
MB 240-81866/3	1	D	11:44	X
LCS 240-81866/4	2	D	11:55	X
ZZZZZZ			12:06	
240-22680-F-2 MS	2	D	12:47	X
ZZZZZZ			12:58	
ZZZZZZ			13:39	
ZZZZZZ			14:20	
240-22783-6	1	D	15:01	X
CCV 240-81866/11	1		15:43	X
CCB 240-81866/12	1		15:54	X

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Analyst: TH Batch Start Date: 04/12/2013

Reporting Units: mg/L Analytical Batch No.: 81866

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	11:22	Dissolved Organic Carbon	26.3	25.0	105	90-110		WC TOC CCV_00128
2	CCB	11:33	Dissolved Organic Carbon	1.0				U	
11	CCV	15:43	Dissolved Organic Carbon	26.8	25.0	107	90-110		WC TOC CCV_00128
12	CCB	15:54	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-22783-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 04/05/2013 15:00 End Date: 04/05/2013 15:00

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-80825/1	1	T	15:00	X
LCS 240-80825/2	1	T	15:00	X
240-22796-D-2 DU	1	T	15:00	X
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
240-22783-6	1	T	15:00	X
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	
ZZZZZZ			15:00	

Prep Types:
T = Total/NA

FORM XIII-IN

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 28, 2013**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / 1,4-DIOXANE / PERCHLORATE**
INORGANIC DATA VALIDATION – TOTAL METALS
LOCKHEED MRC
SAMPLE DELIVERY GROUP (SDG) 240-22881-1

SAMPLES: 5 / Aqueous / VOC

MRC-MW-109A-040513	MRC-MW-19A-040513	MRC-MW08A-040513
MRC-MW08B-040513	TB-040513	

5 / Aqueous / SVOC – 1,4-Dioxane

MRC-MW-18A-040513	MRC-MW-19A-040513	MRC-MW-20A-040513
MRC-MW08A-040513	MRC-MW08B-040513	

5 / Aqueous / Perchlorate

MRC-MW-109A-040513	MRC-MW08A-040513	MRC-MW08B-040513
MRC-MW51A-040513	MRC-MW52A-040513	

7 / Aqueous / Total Metals

MRC-MW-109A-040513	MRC-MW-18A-040513	MRC-MW-19A-040513
MRC-MW-20A-040513	MRC-MW08A-040513	MRC-MW51A-040513
MRC-MW52A-040513		

Overview

The sample set for Lockheed MRC, SDG 240-22881-1, consisted of nine (9) aqueous samples including one (1) aqueous trip blank sample. Five (5) aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Five (5) aqueous samples were analyzed for the semi-volatile organic compound (SVOC) 1,4-dioxane as listed above. Five (5) aqueous samples were analyzed for the analyte perchlorate as listed above. Seven (7) aqueous samples were analyzed for total metals as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on April 5, 2013 and analyzed by TestAmerica Laboratories, Inc., North Canton, Irvine, and Sacramento for the analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260B for VOCs, 8270D for SVOCs, 6020 for metals, 7470A for mercury, and EPA Method 6850 for perchlorate, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank/preparation results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, ICP serial dilution results, ICP interference results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for tert-butyl alcohol and vinyl acetate on instrument A3UX15 on 04/04/13. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were also less than the 0.05 criteria for instrument A3UX15 on 04/12/13 @ 21:48.

  Affected Samples:
  MRC-MW-109A-040513 MRC-MW-19A-040513 MRC-MW08A-040513
  MRC-MW08B-040513 TB-040513
  Action: The sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR).

- The matrix spike (MS) and MS duplicate (MSD) percent recoveries (%Rs) were less than the quality control limit at 0% recovery for 2-chloroethyl vinyl ether for sample MRC-MW-109A-040513.

  Affected Samples:
  MRC-MW-109A-040513 MRC-MW-19A-040513 MRC-MW08A-040513
  MRC-MW08B-040513 TB-040513
  Actions: Acid preservation of VOC samples is known to cause loss of the analyte 2-chloroethyl vinyl ether as noted in the SW-846 Chapter 4.1.2 description for "Sample handling and preservation". This sample and all SDG samples were acid preserved. All SDG samples had non-detected results for 2-chloroethyl vinyl ether. The non-detected sample results for 2-chloroethyl vinyl ether were qualified rejected, (UR).

Minor Problems

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- Sample MRC-MW-19A-040513 had a positive VOC result for the non-requested VOC dichlorofluoromethane (VOCs which had not been requested to be analyzed for in the samples but were calibrated for by the laboratory).

  Affected Sample: MRC-MW-19A-040513
  Actions: The sample VOC analyte dichhlorofluoromethane was qualified as estimated, (NJ), presumptively present.

- The interference AB check standard %R was greater than the 120% quality control limit for zinc for ICSAB 440-99213/11.

  Affected Samples:
  MRC-MW-109A-040513 MRC-MW-18A-040513 MRC-MW-19A-040513
  MRC-MW-20A-040513 MRC-MW08A-040513 MRC-MW51A-040513
  MRC-MW52A-040513
  Actions: The positive zinc analyte sample results were qualified biased high, (K).

- The contract required detection limit (CRDL) %R was less than the 90% (and >50%) quality control limit for copper for CRI 440-99213/8.

  Affected Samples:
  MRC-MW-109A-040513 MRC-MW-18A-040513 MRC-MW-19A-040513
  MRC-MW-20A-040513 MRC-MW08A-040513 MRC-MW51A-040513
  MRC-MW52A-040513
  Actions: The positive sample MRC-MW08A-040513 copper result was qualified biased low, (L). The remaining sample copper positive results were >2X the CRQL and were not qualified.

- The CRDL %Rs were greater than the 110% quality control limit for zinc for both CRI 440-99213/8 and CRI 440-99213/9.
  Affected Samples:
  MRC-MW-109A-040513 MRC-MW-18A-040513 MRC-MW-19A-040513
  MRC-MW-20A-040513 MRC-MW08A-040513 MRC-MW51A-040513
  MRC-MW52A-040513
  Actions: The positive sample MRC-MW-20A-040513 zinc result was qualified biased high, (K). No validation action was taken for the remaining affected sample zinc results as they were all >2X the CRQL.

- The following metal contaminants were detected in the blank samples at the following maximum concentration:

Analyte	Maximum Conc. µg/L	Action Level µg/L
Antimony (1)	0.408	2.040
Cobalt (2)	0.742	3.710
Nickel (2)	1.21	6.05
Barium (3)	0.320	1.600
Cobalt (3)	0.185	0.925
Mercury (4)	0.110	0.550

(1) Maximum concentration found in initial calibration blank sample ICB 440-99213/7 affecting samples MRC-MW-109A-040513, MRC-MW-18A-040513, MRC-MW-19A-040513, MRC-MW-20A-040513, MRC-MW08A-040513, MRC-MW51A-04051, and MRC-MW52A-040513.

(2) Maximum concentration found in continuing calibration blank (CCB) CCB 440-99213/39 affecting samples MRC-MW-109A-040513, MRC-MW-18A-040513, MRC-MW-19A-040513, MRC-MW-20A-040513, MRC-MW08A-040513, MRC-MW51A-04051, and MRC-MW52A-040513.

(3) Maximum concentration found in method blank (MB) MB 440-98850/1-A affecting samples MRC-MW-109A-040513, MRC-MW-18A-040513, MRC-MW-19A-040513, MRC-MW-20A-040513, MRC-MW08A-040513, MRC-MW51A-04051, and MRC-MW52A-040513.

(4) Maximum concentration found in ICB 440-99239/2-A affecting samples MRC-MW-109A-040513, MRC-MW-19A-040513, MRC-MW-20A-040513, MRC-MW08A-040513, MRC-MW51A-04051, and MRC-MW52A-040513.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. Sample positive mercury results were qualified for blank contamination.

Notes

Sample MRC-MW-109A-040513 was analyzed diluted 5X for VOCs resulting in elevated concentrations for non-detected VOC analytes.

The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% and less than the 50% quality control limit for chloroethane, vinyl acetate, cis-1,3-dichloropropene, trans-1,3-dichloropropene, bromoform, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene for instrument A3UX15 on 04/12/13 @ 21:48.

Affected Samples:

MRC-MW-109A-040513	MRC-MW-19A-040513	MRC-MW08A-040513
MRC-MW08B-040513	TB-040513	

Action: The samples had non-detected results for the analytes chloroethane, vinyl acetate, cis-1,3-dichloropropene, trans-1,3-dichloropropene, bromoform, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene which were not qualified.

The SVOC surrogate %Rs were less than the quality control limit for the acid surrogates phenol-d5 and 2,4,6-tribromophenol for sample MRC-MW-19A-040513

Affected Sample: MRC-MW-19A-040513

Actions: No validation action was necessary as 1,4-dioxane is considered a base/neutral analyte unaffected by acid surrogate non-compliances.

The SVOC surrogate %Rs were less than the quality control limit for the acid surrogate 2,4,6-tribromophenol and the base/neutral surrogate terphenyl-d14 for sample MRC-MW08B-040513. No validation action was necessary for a single acid and a single base/neutral surrogate non-compliance.

Sample MRC-MW-109A-040513 was analyzed at a 2X dilution for all metals except mercury resulting in elevated results for non-detected metal analytes.

The CRDL %Rs were greater than the 120% quality control limit for mercury for CRA 440-99239/5-A on 04/19/13 @ 13:44 and 16:27.

Affected Samples:

MRC-MW-109A-040513	MRC-MW-18A-040513	MRC-MW-19A-040513
MRC-MW-20A-040513	MRC-MW08A-040513	MRC-MW51A-040513
MRC-MW52A-040513		

Actions: No validation action was taken for the non-detected mercury results. The sample positive mercury results were qualified non-detected for blank contamination and no further action was necessary.

The matrix spike (MS) and MS duplicate (MSD) %Rs were non-compliant for the metal analyte beryllium for a spiked sample from another SDG (240-22783-A-5-B). No validation action was necessary as the spiked sample was not from this SDG.

The CRDL %Rs were greater than the 110% quality control limit for selenium and vanadium for CRI 440-99213/8, and for nickel and selenium for CRI 440-99213/9.

Affected Samples:

MRC-MW-109A-040513	MRC-MW-18A-040513	MRC-MW-19A-040513
MRC-MW-20A-040513	MRC-MW08A-040513	MRC-MW51A-040513
MRC-MW52A-040513		

Actions: No validation action was taken as the affected sample results were either non-detected, positive and >2X the CRQL, or qualified estimated, (J), due to a conflicting qualifier.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol and vinyl acetate non-detected sample results were rejected due to calibration and CCV RRF criteria non-compliances. Sample non-detected 2-chloroethyl vinyl ether results were rejected for MS and MSD %R non-compliances. Sample mercury results were qualified blank contamination. Sample metal analyte results were qualified for CRDL and interference check standard %R non-compliances.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). A sample MRC-MW-19A-040513 positive VOC result for dichlorfluoromethane (an identified non-request VOC analyte) was qualified as presumptively present.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260B, 8270D, 6020, 7470A, EPA Method, 6850, the Region III EPA Functional Guidelines for Organic Data Validation (9/94), and the Region III EPA Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (April 1993).

Tetra Tech
Joseph Kalnyak
Data Validator/Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW08A-040513			MRC-MW08B-040513			MRC-MW-109A-040513			MRC-MW-19A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-2			240-22881-3			240-22881-9			240-22881-6		
FRACTION: OV	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		1.2	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		1.1	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.9	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		1.4	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.75	U		2.8		
1,1-DICHLOROETHENE		0.19	U		0.19	U		5.1			0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.65	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.85	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		2.2	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.03	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.75	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.6	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		3.4	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		1.2	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		1.1	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.9	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.7	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.8	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.65	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		2.9	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	UR	D	0.99	UR	D	5	UR	D	0.99	UR	D
2-CHLOROTOLUENE		0.11	U		0.11	U		0.55	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		2.1	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.9	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.6	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		1.6	U		0.32	U	
ACETONE		1.2	J	P	1.1	U		5.5	U		1.1	U	
BENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		1.5	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.75	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		3.2	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		2.1	U		0.41	U	

PROJ_NO: 04795	NSAMPLE	TB-040513
SDG: 240-22881-1	LAB_ID	240-22881-1
FRACTION: OV	SAMP_DATE	4/5/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U	
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	UR	D
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.1	U	
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW08A-040513			MRC-MW08B-040513			MRC-MW-109A-040513			MRC-MW-19A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-2			240-22881-3			240-22881-9			240-22881-6		
FRACTION: OV	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		0.65	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.65	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.75	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.9	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		1.5	U		0.29	U	
CHLOROFORM		0.16	U		0.19	J	P	0.8	U		0.68	J	P
CHLOROMETHANE		0.3	U		0.3	U		1.5	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		110			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.7	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		1.4	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		1.6	U		0.31	U	
DICHLOROFLUOROMETHANE											1.6	NJ	Z1
DIISOPROPYL ETHER		1.5	U		1.5	U		7.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.55	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.85	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		1.5	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		1.2	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.85	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		1.7	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		1.2	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.6	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.7	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.7	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
STYRENE		0.11	U		0.11	U		0.55	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.34	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	20	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		1.5	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.65	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		1.4	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		2.5	J	P	0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.95	U		0.19	U	
TRICHLOROETHENE		0.17	U		1.6			0.85	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	TB-040513
SDG: 240-22881-1	LAB_ID	240-22881-1
FRACTION: OV	SAMP_DATE	4/5/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON DISULFIDE	0.13	U	
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U	
DICHLOROFLUOROMETHANE			
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	U	
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	
TRICHLOROETHENE	0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW08A-040513			MRC-MW08B-040513			MRC-MW-109A-040513			MRC-MW-19A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-2			240-22881-3			240-22881-9			240-22881-6		
FRACTION: OV	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		1.1	U		1.1		
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.95	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		55			0.22	U	

PROJ_NO: 04795	NSAMPLE	TB-040513		
SDG: 240-22881-1	LAB_ID	240-22881-1		
FRACTION: OV	SAMP_DATE	4/5/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U	
VINYL ACETATE		0.19	UR	C
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW08A-040513			MRC-MW08B-040513			MRC-MW-18A-040513			MRC-MW-19A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-2			240-22881-3			240-22881-7			240-22881-6		
FRACTION: OS	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.5	U		0.5	U		5.2			6.6		

PROJ_NO: 04795	NSAMPLE	MRC-MW-20A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-8		
FRACTION: OS	SAMP_DATE	4/5/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,4-DIOXANE		2.4		

PROJ_NO: 04795	NSAMPLE	MRC-MW08A-040513			MRC-MW08B-040513			MRC-MW-109A-040513			MRC-MW51A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-2			240-22881-3			240-22881-9			240-22881-4		
FRACTION: MISC	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		2.1			0.082	U		0.082	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW52A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-5		
FRACTION: MISC	SAMP_DATE	4/5/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
PERCHLORATE		0.1	J	P

PROJ_NO: 04795	NSAMPLE	MRC-MW08A-040513			MRC-MW-109A-040513			MRC-MW-18A-040513			MRC-MW-19A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-2			240-22881-9			240-22881-7			240-22881-6		
FRACTION: M	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.6	U		0.3	U		0.3	U	
ARSENIC		1.8	J	P	1.8	U		0.9	U		0.9	U	
BARIUM		170			110			350			36		
BERYLLIUM		1.8			0.75	J	P	6.4			2.6		
CADMIUM		0.1	U		0.2	U		0.68	J	P	1.5		
CHROMIUM		0.9	U		13			0.9	U		0.9	U	
COBALT		89			28			130			730		
COPPER		2.3			210			36			200		
LEAD		0.93	J	P	9.8			0.59	J	P	0.6	J	P
MERCURY		0.13	B	A	0.1	U		0.1	U		0.1	U	
MOLYBDENUM		0.5	J	P	0.4	U		0.2	U		0.2	U	
NICKEL		180			29			220			1100		
SELENIUM		0.5	U		1	U		0.51	J	P	0.63	J	P
SILVER		0.1	U		0.2	U		0.1	U		0.1	U	
THALLIUM		0.2	U		0.4	U		0.2	U		0.2	U	
VANADIUM		0.8	U		32	J	P	0.8	U		0.8	U	
ZINC		66	K	K	300	K	K	200	K	K	610	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW-20A-040513			MRC-MW51A-040513			MRC-MW52A-040513		
SDG: 240-22881-1	LAB_ID	240-22881-8			240-22881-4			240-22881-5		
FRACTION: M	SAMP_DATE	4/5/2013			4/5/2013			4/5/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		4		
ARSENIC		0.9	U		0.9	U		0.9	U	
BARIUM		42			100			390		
BERYLLIUM		0.45	J	P	36			10		
CADMIUM		0.1	U		0.47	J	P	0.79	J	P
CHROMIUM		0.98	J	P	0.9	U		0.9	U	
COBALT		48			420			570		
COPPER		8.7			11			30		
LEAD		1.3			1.1			0.36	J	P
MERCURY		0.1	U		0.1	B	A	0.1	U	
MOLYBDENUM		0.2	U		0.2	U		0.61	J	P
NICKEL		77			730			370		
SELENIUM		0.53	J	P	1.2	J	P	0.5	U	
SILVER		0.1	U		0.1	U		0.15	J	P
THALLIUM		0.2	U		0.2	U		0.36	J	P
VANADIUM		0.8	U		0.8	U		1.9	J	P
ZINC		37	K	CK	780	K	K	550	K	K

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-109A-040513 | Lab Sample ID: 240-22881-9

Matrix: Water | Lab File ID: UXC0761.D

Analysis Method: 8260B | Date Collected: 04/05/2013 15:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/13/2013 01:09

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	25	U	25	5.5
71-43-2	Benzene	5.0	U	5.0	0.65
108-86-1	Bromobenzene	5.0	U	5.0	0.65
74-97-5	Bromochloromethane	5.0	U	5.0	1.5
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75
75-25-2	Bromoform	5.0	U	5.0	3.2
74-83-9	Bromomethane	5.0	U	5.0	2.1
78-93-3	2-Butanone	25	U	25	2.9
75-15-0	Carbon disulfide	5.0	U	5.0	0.65
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.65
108-90-7	Chlorobenzene	5.0	U	5.0	0.75
75-00-3	Chloroethane	5.0	U	5.0	1.5
110-75-8	2-Chloroethyl vinyl ether	50	U	50	5.0
67-66-3	Chloroform	5.0	U	5.0	0.80
74-87-3	Chloromethane	5.0	U	5.0	1.5
95-49-8	2-Chlorotoluene	5.0	U	5.0	0.55
106-43-4	4-Chlorotoluene	5.0	U	5.0	0.90
156-59-2	cis-1,2-Dichloroethene	110		5.0	0.85
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.70
124-48-1	Dibromochloromethane	5.0	U	5.0	0.90
96-12-8	1,2-Dibromo-3-Chloropropane	25	U	25	3.4
106-93-4	1,2-Dibromoethane	5.0	U	5.0	1.2
74-95-3	Dibromomethane	5.0	U	5.0	1.4
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.65
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.70
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.65
75-71-8	Dichlorodifluoromethane	5.0	U	5.0	1.6
75-34-3	1,1-Dichloroethane	5.0	U	5.0	0.75
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	5.1		5.0	0.95
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.90
142-28-9	1,3-Dichloropropane	5.0	U	5.0	0.80
594-20-7	2,2-Dichloropropane	5.0	U	5.0	0.65
563-58-6	1,1-Dichloropropene	5.0	U	5.0	0.65
108-20-3	Diisopropyl ether	25	U	25	7.5
100-41-4	Ethylbenzene	5.0	U	5.0	0.85

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-109A-040513 Lab Sample ID: 240-22881-9

Matrix: Water Lab File ID: UXC0761.D

Analysis Method: 8260B Date Collected: 04/05/2013 15:15

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 01:09

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	25	U	25	0.55
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.5
591-78-6	2-Hexanone	25	U	25	2.1
98-82-8	Isopropylbenzene	5.0	U	5.0	0.65
75-09-2	Methylene Chloride	5.0	U	5.0	1.7
108-10-1	4-Methyl-2-pentanone	25	U	25	1.6
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.85
179601-23-1	m-Xylene & p-Xylene	10	U	10	1.2
91-20-3	Naphthalene	5.0	U	5.0	1.2
104-51-8	n-Butylbenzene	5.0	U	5.0	0.60
103-65-1	n-Propylbenzene	5.0	U	5.0	0.70
95-47-6	o-Xylene	5.0	U	5.0	0.70
99-87-6	p-Isopropyltoluene	5.0	U	5.0	0.60
135-98-8	sec-Butylbenzene	5.0	U	5.0	0.65
100-42-5	Styrene	5.0	U	5.0	0.55
994-05-8	Tert-amyl-methyl ether (TAME)	25	U	25	0.34
75-65-0	tert-Butyl alcohol	100	U	100	20
98-06-6	tert-Butylbenzene	5.0	U	5.0	0.65
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.2
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90
127-18-4	Tetrachloroethene	5.0	U	5.0	1.5
108-88-3	Toluene	5.0	U	5.0	0.65
156-60-5	trans-1,2-Dichloroethene	2.5	J	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.95
87-61-6	1,2,3-Trichlorobenzene	5.0	U	5.0	0.85
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	0.75
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	1.1
79-01-6	Trichloroethene	5.0	U	5.0	0.85
75-69-4	Trichlorofluoromethane	5.0	U	5.0	1.1
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	2.2
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	5.0	U	5.0	1.4
526-73-8	1,2,3-Trimethylbenzene	25	U	25	0.030
95-63-6	1,2,4-Trimethylbenzene	5.0	U	5.0	0.60
108-05-4	Vinyl acetate	10	U	10	0.95
75-01-4	Vinyl chloride	55		5.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-109A-040513 Lab Sample ID: 240-22881-9

Matrix: Water Lab File ID: UXC0761.D

Analysis Method: 8260B Date Collected: 04/05/2013 15:15

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 01:09

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	10	U	10	1.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-109A-040513 Lab Sample ID: 240-22881-9

Matrix: Water Lab File ID: UXC0761.D

Analysis Method: 8260B Date Collected: 04/05/2013 15:15

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 01:09

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-19A-040513 | Lab Sample ID: 240-22881-6

Matrix: Water | Lab File ID: UXC0760.D

Analysis Method: 8260B | Date Collected: 04/05/2013 10:53

Sample wt/vol: 5(mL) | Date Analyzed: 04/13/2013 00:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	0.68	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	2.8		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-19A-040513 Lab Sample ID: 240-22881-6

Matrix: Water Lab File ID: UXC0760.D

Analysis Method: 8260B Date Collected: 04/05/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.1		1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-19A-040513 Lab Sample ID: 240-22881-6

Matrix: Water Lab File ID: UXC0760.D

Analysis Method: 8260B Date Collected: 04/05/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-19A-040513 Lab Sample ID: 240-22881-6

Matrix: Water Lab File ID: UXC0760.D

Analysis Method: 8260B Date Collected: 04/05/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
75-43-4	Dichlorofluoromethane	1.81	1.6	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08A-040513 | Lab Sample ID: 240-22881-2

Matrix: Water | Lab File ID: UXC0758.D

Analysis Method: 8260B | Date Collected: 04/05/2013 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/13/2013 00:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.2	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08A-040513 Lab Sample ID: 240-22881-2

Matrix: Water Lab File ID: UXC0758.D

Analysis Method: 8260B Date Collected: 04/05/2013 10:20

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08A-040513 Lab Sample ID: 240-22881-2

Matrix: Water Lab File ID: UXC0758.D

Analysis Method: 8260B Date Collected: 04/05/2013 10:20

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08A-040513 Lab Sample ID: 240-22881-2

Matrix: Water Lab File ID: UXC0758.D

Analysis Method: 8260B Date Collected: 04/05/2013 10:20

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 Lab Sample ID: 240-22881-3

Matrix: Water Lab File ID: UXC0759.D

Analysis Method: 8260B Date Collected: 04/05/2013 11:20

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	0.19	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 | Lab Sample ID: 240-22881-3

Matrix: Water | Lab File ID: UXC0759.D

Analysis Method: 8260B | Date Collected: 04/05/2013 11:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/13/2013 00:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.6		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 | Lab Sample ID: 240-22881-3

Matrix: Water | Lab File ID: UXC0759.D

Analysis Method: 8260B | Date Collected: 04/05/2013 11:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/13/2013 00:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 Lab Sample ID: 240-22881-3

Matrix: Water Lab File ID: UXC0759.D

Analysis Method: 8260B Date Collected: 04/05/2013 11:20

Sample wt/vol: 5(mL) Date Analyzed: 04/13/2013 00:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: TB-040513 | Lab Sample ID: 240-22881-1

Matrix: WQ | Lab File ID: UXC0757.D

Analysis Method: 8260B | Date Collected: 04/05/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/12/2013 23:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: TB-040513 Lab Sample ID: 240-22881-1

Matrix: WQ Lab File ID: UXC0757.D

Analysis Method: 8260B Date Collected: 04/05/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/12/2013 23:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: TB-040513 | Lab Sample ID: 240-22881-1

Matrix: WQ | Lab File ID: UXC0757.D

Analysis Method: 8260B | Date Collected: 04/05/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/12/2013 23:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: TB-040513 Lab Sample ID: 240-22881-1

Matrix: WQ Lab File ID: UXC0757.D

Analysis Method: 8260B Date Collected: 04/05/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/12/2013 23:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-18A-040513 | Lab Sample ID: 240-22881-7

Matrix: Water | Lab File ID: 0415009.D

Analysis Method: 8270D | Date Collected: 04/05/2013 12:17

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 1000(mL) | Date Analyzed: 04/15/2013 11:39

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81876 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	5.2		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		20-110
367-12-4	2-Fluorophenol (Surr)	21		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	37		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	51		21-110
4165-62-2	Phenol-d5 (Surr)	23		21-110
1718-51-0	Terphenyl-d14 (Surr)	51		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-19A-040513 | Lab Sample ID: 240-22881-6

Matrix: Water | Lab File ID: 0415010.D

Analysis Method: 8270D | Date Collected: 04/05/2013 10:53

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 1020(mL) | Date Analyzed: 04/15/2013 12:01

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81876 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	6.6		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	11		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	11	X	21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	13	X	21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-20A-040513 | Lab Sample ID: 240-22881-8

Matrix: Water | Lab File ID: 0415013.D

Analysis Method: 8270D | Date Collected: 04/05/2013 14:43

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 1010(mL) | Date Analyzed: 04/15/2013 13:07

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81876 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	2.4		0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		20-110
367-12-4	2-Fluorophenol (Surr)	55		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	52		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	51		21-110
4165-62-2	Phenol-d5 (Surr)	56		21-110
1718-51-0	Terphenyl-d14 (Surr)	44		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08A-040513 | Lab Sample ID: 240-22881-2

Matrix: Water | Lab File ID: 0415012.D

Analysis Method: 8270D | Date Collected: 04/05/2013 10:20

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 980(mL) | Date Analyzed: 04/15/2013 12:45

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81876 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	57		20-110
367-12-4	2-Fluorophenol (Surr)	58		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	67		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	54		21-110
4165-62-2	Phenol-d5 (Surr)	60		21-110
1718-51-0	Terphenyl-d14 (Surr)	50		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 | Lab Sample ID: 240-22881-3

Matrix: Water | Lab File ID: 0415011.D

Analysis Method: 8270D | Date Collected: 04/05/2013 11:20

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 980(mL) | Date Analyzed: 04/15/2013 12:23

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81876 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	24		20-110
367-12-4	2-Fluorophenol (Surr)	22		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	20	X	21-110
4165-60-0	Nitrobenzene-d5 (Surr)	23		21-110
4165-62-2	Phenol-d5 (Surr)	24		21-110
1718-51-0	Terphenyl-d14 (Surr)	20	X	24-110

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-109A-040513 Lab Sample ID: 240-22881-9

Matrix: Water Lab File ID: 17APR13-Perc-089.d

Analysis Method: 6850 Date Collected: 04/05/2013 15:15

Extraction Method: Filtration Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) Date Analyzed: 04/18/2013 10:56

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08A-040513 Lab Sample ID: 240-22881-2

Matrix: Water Lab File ID: 17APR13-Perc-083.d

Analysis Method: 6850 Date Collected: 04/05/2013 10:20

Extraction Method: Filtration Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) Date Analyzed: 04/18/2013 09:17

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 | Lab Sample ID: 240-22881-3

Matrix: Water | Lab File ID: 17APR13-Perc-084.d

Analysis Method: 6850 | Date Collected: 04/05/2013 11:20

Extraction Method: Filtration | Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/18/2013 09:33

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 75(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	2.1		0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW51A-040513 Lab Sample ID: 240-22881-4

Matrix: Water Lab File ID: 17APR13-Perc-087.d

Analysis Method: 6850 Date Collected: 04/05/2013 12:20

Extraction Method: Filtration Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) Date Analyzed: 04/18/2013 10:23

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW52A-040513 Lab Sample ID: 240-22881-5

Matrix: Water Lab File ID: 17APR13-Perc-088.d

Analysis Method: 6850 Date Collected: 04/05/2013 13:20

Extraction Method: Filtration Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) Date Analyzed: 04/18/2013 10:39

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.10	J	0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-109A-040513 Lab Sample ID: 240-22881-9

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 15:15

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-18A-040513 Lab Sample ID: 240-22881-7

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 12:17

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-19A-040513 Lab Sample ID: 240-22881-6

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 10:53

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-20A-040513 Lab Sample ID: 240-22881-8

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 14:43

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW08A-040513 Lab Sample ID: 240-22881-2

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 10:20

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.13	0.20	0.10	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW51A-040513 Lab Sample ID: 240-22881-4

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 12:20

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.10	0.20	0.10	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW52A-040513 Lab Sample ID: 240-22881-5

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 13:20

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-109A-040513 Lab Sample ID: 240-22881-9

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 15:15

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	4.0	4.0	0.60	ug/L	U		2	6020
7440-38-2	Arsenic	10	10	1.8	ug/L	U		2	6020
7440-41-7	Beryllium	0.75	2.0	0.20	ug/L	J		2	6020
7440-43-9	Cadmium	2.0	2.0	0.20	ug/L	U		2	6020
7440-39-3	Barium	110	10	0.60	ug/L		B	2	6020
7440-47-3	Chromium	13	4.0	1.8	ug/L			2	6020
7440-50-8	Copper	210	4.0	1.0	ug/L			2	6020
7440-02-0	Nickel	29	4.0	1.0	ug/L			2	6020
7439-92-1	Lead	9.8	2.0	0.40	ug/L			2	6020
7782-49-2	Selenium	10	10	1.0	ug/L	U		2	6020
7440-48-4	Cobalt	28	2.0	0.20	ug/L		B	2	6020
7440-22-4	Silver	2.0	2.0	0.20	ug/L	U		2	6020
7440-28-0	Thallium	4.0	4.0	0.40	ug/L	U		2	6020
7440-66-6	Zinc	300	40	8.0	ug/L			2	6020
7439-98-7	Molybdenum	20	20	0.40	ug/L	U		2	6020
7440-62-2	Vanadium	32	40	1.6	ug/L	J		2	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-18A-040513 Lab Sample ID: 240-22881-7

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 12:17

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	6.4	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.68	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	350	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	36	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	220	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.59	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.51	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	130	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	200	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-19A-040513 Lab Sample ID: 240-22881-6

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 10:53

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	2.6	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.5	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	36	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	200	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	1100	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.60	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	0.63	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	730	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	610	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-20A-040513 Lab Sample ID: 240-22881-8

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 14:43

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.45	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	42	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	0.98	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	8.7	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	77	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.3	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.53	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	48	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	37	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW08A-040513 Lab Sample ID: 240-22881-2

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 10:20

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	1.8	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.8	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	170	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.3	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	180	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.93	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	89	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	66	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.50	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW51A-040513 Lab Sample ID: 240-22881-4

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 12:20

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	36	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.47	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	100	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	11	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	730	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.1	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	1.2	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	420	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	780	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW52A-040513 Lab Sample ID: 240-22881-5

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG ID.:

Matrix: Water Date Sampled: 04/05/2013 13:20

Reporting Basis: WET Date Received: 04/06/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	4.0	2.0	0.30	ug/L			1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	10	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.79	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	390	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	30	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	370	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.36	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	570	1.0	0.10	ug/L		B	1	6020
7440-22-4	Silver	0.15	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.36	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	550	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.61	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	1.9	20	0.80	ug/L	J		1	6020

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 240-22881-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-20A-040513	240-22881-8	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
HG	UG/L	MRC-MW08A-040513	240-22881-2	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
HG	UG/L	MRC-MW51A-040513	240-22881-4	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
HG	UG/L	MRC-MW-19A-040513	240-22881-6	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
HG	UG/L	MRC-MW-18A-040513	240-22881-7	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
HG	UG/L	MRC-MW-109A-040513	240-22881-9	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
HG	UG/L	MRC-MW52A-040513	240-22881-5	NM	4/5/2013	4/19/2013	4/19/2013	14	0	14
M	UG/L	MRC-MW52A-040513	240-22881-5	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
M	UG/L	MRC-MW-19A-040513	240-22881-6	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
M	UG/L	MRC-MW08A-040513	240-22881-2	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
M	UG/L	MRC-MW-109A-040513	240-22881-9	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
M	UG/L	MRC-MW-18A-040513	240-22881-7	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
M	UG/L	MRC-MW51A-040513	240-22881-4	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
M	UG/L	MRC-MW-20A-040513	240-22881-8	NM	4/5/2013	4/17/2013	4/18/2013	12	1	13
PCL	UG/L	MRC-MW08A-040513	240-22881-2	NM	4/5/2013	4/16/2013	4/18/2013	11	2	13

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MRC-MW08B-040513	240-22881-3	NM	4/5/2013	4/16/2013	4/18/2013	11	2	13
PCL	UG/L	MRC-MW-109A-040513	240-22881-9	NM	4/5/2013	4/16/2013	4/18/2013	11	2	13
PCL	UG/L	MRC-MW52A-040513	240-22881-5	NM	4/5/2013	4/16/2013	4/18/2013	11	2	13
PCL	UG/L	MRC-MW51A-040513	240-22881-4	NM	4/5/2013	4/16/2013	4/18/2013	11	2	13
OS	UG/L	MRC-MW08B-040513	240-22881-3	NM	4/5/2013	4/11/2013	4/15/2013	6	4	10
OS	UG/L	MRC-MW-18A-040513	240-22881-7	NM	4/5/2013	4/11/2013	4/15/2013	6	4	10
OS	UG/L	MRC-MW-19A-040513	240-22881-6	NM	4/5/2013	4/11/2013	4/15/2013	6	4	10
OS	UG/L	MRC-MW-20A-040513	240-22881-8	NM	4/5/2013	4/11/2013	4/15/2013	6	4	10
OS	UG/L	MRC-MW08A-040513	240-22881-2	NM	4/5/2013	4/11/2013	4/15/2013	6	4	10
OV	UG/L	MRC-MW08A-040513	240-22881-2	NM	4/5/2013	4/13/2013	4/13/2013	8	0	8
OV	UG/L	MRC-MW08B-040513	240-22881-3	NM	4/5/2013	4/13/2013	4/13/2013	8	0	8
OV	UG/L	MRC-MW-109A-040513	240-22881-9	NM	4/5/2013	4/13/2013	4/13/2013	8	0	8
OV	UG/L	MRC-MW-19A-040513	240-22881-6	NM	4/5/2013	4/13/2013	4/13/2013	8	0	8
OV	UG/L	TB-040513	240-22881-1	NM	4/5/2013	4/12/2013	4/12/2013	7	0	7

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Tony Aparicio	4/5/13	114477
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
20251 Century Blvd Ste 200	(301) 528-5552		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Germantown / MD / 20874	Stu Cameron		
Project Name and Location (State)	**Carrier/Waybill Number**		
MRC GW Sampling MD			
Contract/Purchase Order/Quote No.			
112IC04795-02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	1,4-Dioxane	Total Metals	Perchlorate
TB-040513	—	—		X						2			X			
MRC-MW08A-040513	4/5/13	1020		X			3		1	3			X	X	X	X
MRC-MW08B-040513		1120		X			3			3			X	X		X
~~MRC-MW08-BC~~																
MRC-MW51A-040513		1220		X			1		1						X	X
MRC-MW52A-040513		1320		X			1		1						X	X
MRC-MW-19A-040513		1053		X			2		1	3			X	X	X	
MRC-MW-18A-040513		1217		X			2		1					X	X	
MRC-MW-20A-040513		1443		X			2		1					X	X	
MRC-MW-109A-040513		1515		X			1		1	3			X		X	X

Special Instructions/ Conditions of Receipt

240-22881 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4-5-13	1600	1. Received By	4/5/13	1600
2. Relinquished By	4/5/13	1710	2. Received By	4-6-13	945
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22881

Client TETRA TECH Site Name MRC GW By: [signature]

Cooler Received on 4-6-13 Opened on 4-6-13 (Signature)

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF 0°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 4G	(CF +1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 5G	(CF +1 °C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 8	(CF +1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C

☐ Multiple on Back

2. Were custody seals on the outside of the cooler(s)?	If Yes Quantity 1 BA	(Yes) No
-Were custody seals on the outside of the cooler(s) signed & dated?		(Yes) No NA
-Were custody seals on the bottle(s)?		Yes (No)
3. Shippers' packing slip attached to the cooler(s)?		(Yes) No
4. Did custody papers accompany the sample(s)?		(Yes) No
5. Were the custody papers relinquished & signed in the appropriate place?		(Yes) No
6. Did all bottles arrive in good condition (Unbroken)?		(Yes) No
7. Could all bottle labels be reconciled with the COC?		(Yes) No
8. Were correct bottle(s) used for the test(s) indicated?		(Yes) No
9. Sufficient quantity received to perform indicated analyses?		(Yes) No
10. Were sample(s) at the correct pH upon receipt?		(Yes) No NA
11. Were VOAs on the COC?		(Yes) No
12. Were air bubbles >6 mm in any VOA vials?		Yes (No) NA
13. Was a trip blank present in the cooler(s)?		(Yes) No

Contacted PM JWM Date 4/6/13 by TB via Verbal (Voice Mail) Other

Concerning breakage

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) MRC-MW-19A-040513 1X 1Lrtem were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
	pH Strip Lot# HC256691		
1020	<2	4-26-13	TLS
1220	<2		
1320	<2		
1053	<2		
1217	<2		
1443	<2		
1515	<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client Cooler	3.9	3.9	1	ICE
Client Cooler	2.2	2.2	1	ICE

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22881-1

Login Number: 22881
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 04/09/13 12:40 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22881-1

Login Number: 22881
List Number: 1
Creator: Hall, Megan

List Source: TestAmerica Sacramento
List Creation: 04/09/13 03:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW SAMPLING MD

Report Number: 240-22881-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury analysis were performed at the TestAmerica Irvine Laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/06/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.2 and 3.9 C.

One unpreserved amber liter for the following sample was received broken: MRC-MW-19A-040513 (240-22881-6). There is still enough volume to run 1,4-Dioxane.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-040513 (240-22881-1), MRC-MW08A-040513 (240-22881-2), MRC-MW08B-040513 (240-22881-3), MRC-MW-19A-040513 (240-22881-6) and MRC-MW-109A-040513 (240-22881-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/12/2013 and 04/13/2013.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MRC-MW-109A-040513MS/MSD (240-22881-9) in batch 240-81772.

Sample MRC-MW-109A-040513 (240-22881-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW08A-040513 (240-22881-2), MRC-MW08B-040513 (240-22881-3), MRC-MW-19A-040513 (240-22881-6), MRC-MW-18A-040513 (240-22881-7) and MRC-MW-20A-040513 (240-22881-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/11/2013 and analyzed on 04/15/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MRC-MW08B-040513 (240-22881-3). 2,4,6-Tribromophenol (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for MRC-MW-19A-040513 (240-22881-6).

The following sample(s) contained one acid and/or one base surrogate outside acceptance limits: MRC-MW08B-040513 (240-22881-3). The laboratory's SOP allows one acid surrogate and/or one base surrogate to be outside acceptance limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

PERCHLORATE

Samples MRC-MW08A-040513 (240-22881-2), MRC-MW08B-040513 (240-22881-3), MRC-MW51A-040513 (240-22881-4), MRC-MW52A-040513 (240-22881-5) and MRC-MW-109A-040513 (240-22881-9) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/16/2013 and analyzed on 04/18/2013.

No difficulties were encountered during the perchlorate analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW08A-040513 (240-22881-2), MRC-MW51A-040513 (240-22881-4), MRC-MW52A-040513 (240-22881-5), MRC-MW-19A-040513 (240-22881-6), MRC-MW-18A-040513 (240-22881-7), MRC-MW-20A-040513 (240-22881-8) and MRC-MW-109A-040513 (240-22881-9) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/17/2013 and analyzed on 04/18/2013.

Barium and Cobalt were detected in method blank MB 440-98850/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW-109A-040513 (240-22881-9)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The matrix spike / matrix spike duplicate (MS/MSD) percent recoveries for batch 440-98850 were outside control limits for Be. This is attributed to matrix interferences.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW08A-040513 (240-22881-2), MRC-MW51A-040513 (240-22881-4), MRC-MW52A-040513 (240-22881-5), MRC-MW-19A-040513 (240-22881-6), MRC-MW-18A-040513 (240-22881-7), MRC-MW-20A-040513 (240-22881-8) and MRC-MW-109A-040513 (240-22881-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/19/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22881-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22881-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-22881-1	TB-040513	WQ	04/05/13 00:00	04/06/13 09:45
240-22881-2	MRC-MW08A-040513	Water	04/05/13 10:20	04/06/13 09:45
240-22881-3	MRC-MW08B-040513	Water	04/05/13 11:20	04/06/13 09:45
240-22881-4	MRC-MW51A-040513	Water	04/05/13 12:20	04/06/13 09:45
240-22881-5	MRC-MW52A-040513	Water	04/05/13 13:20	04/06/13 09:45
240-22881-6	MRC-MW-19A-040513	Water	04/05/13 10:53	04/06/13 09:45
240-22881-7	MRC-MW-18A-040513	Water	04/05/13 12:17	04/06/13 09:45
240-22881-8	MRC-MW-20A-040513	Water	04/05/13 14:43	04/06/13 09:45
240-22881-9	MRC-MW-109A-040513	Water	04/05/13 15:15	04/06/13 09:45

Detection Limit Exceptions Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW SAMPLING MD

TestAmerica Job ID: 240-22881-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260B	WQ	2-Butanone	ug/L	5.0	10
8260B	WQ	2-Hexanone	ug/L	5.0	10
8260B	WQ	4-Methyl-2-pentanone	ug/L	5.0	10
8260B	WQ	Acetone	ug/L	5.0	10
8260B	WQ	Diisopropyl ether	ug/L	5.0	10
8260B	WQ	tert-Butyl alcohol	ug/L	20	50

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F	MS or MSD exceeds the control limits

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

LCMS

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
F	MS or MSD exceeds the control limits
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
~~Acrolein~~	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	~~0.0383~~	0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
~~Acetonitrile~~	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		~~0.0282~~				12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Lin1	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
~~Tetrahydrofuran~~	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	~~0.0478~~							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
~~1,4-Dioxane~~	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	0.0028							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Linl	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Linl	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3734		1.00	0.0100	-4.4	50.0
Chloromethane	Ave	0.5133	0.5639	0.1000	1.00	0.0100	9.9	50.0
Vinyl chloride	Ave	0.5765	0.6098		1.00	0.0100	5.8	20.0
Bromomethane	Ave	0.3951	0.3863		1.00	0.0100	-2.2	50.0
Chloroethane	Ave	0.3438	0.3863		1.00	0.0100	12.4	50.0
Trichlorofluoromethane	Ave	0.5693	0.6223		1.00	0.0100	9.3	50.0
Acrolein	Qua		0.0606		20.0	0.0300	48.3	50.0
1,1-Dichloroethene	Ave	0.3445	0.4197		1.00	0.0100	21.8*	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3676		1.00	0.0100	39.7	50.0
Acetone	Qua		0.0747		10.0	0.0200	-0.2	50.0
Iodomethane	Ave	0.4958	0.6219		1.00	0.0100	25.4	50.0
Carbon disulfide	Ave	0.7463	1.004		1.00	0.0100	34.5	50.0
Acetonitrile	Ave	0.0282	0.0333		20.0	0.0300	18.3	50.0
Methyl acetate	Ave	0.1586	0.1827		10.0	0.0100	15.2	50.0
Methylene Chloride	Lin1		0.4258		1.00	0.0100	11.5	50.0
tert-Butyl alcohol	Ave	0.0097	0.0098		50.0	0.200	1.3	50.0
Acrylonitrile	Ave	0.0871	0.0938		20.0	0.0300	7.6	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3791		1.00	0.0100	6.2	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6624		1.00	0.0100	4.9	50.0
Hexane	Ave	0.0668	0.0850		1.00	0.0100	27.3*	20.0
1,1-Dichloroethane	Ave	0.5749	0.6173	0.1000	1.00	0.0100	7.4	50.0
Vinyl acetate	Ave	0.0383	0.0347		2.00	0.0100	-9.4	50.0
2,2-Dichloropropane	Ave	0.2770	0.2681		1.00	0.0100	-3.2	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4011		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0883		10.0	0.0200	-3.0	50.0
Bromochloromethane	Ave	0.1662	0.1613		1.00	0.0100	-3.0	50.0
Tetrahydrofuran	Lin1		0.0486		5.00	0.0100	-3.0	50.0
Chloroform	Ave	0.5671	0.6009		1.00	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4343		1.00	0.0100	5.4	50.0
Cyclohexane	Ave	0.5423	0.6246		1.00	0.0100	15.2	50.0
1,1-Dichloropropene	Ave	0.4381	0.4705		1.00	0.0100	7.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3480		1.00	0.0100	7.3	50.0
Benzene	Ave	1.387	1.441		1.00	0.0100	3.9	50.0
1,2-Dichloroethane	Ave	0.4040	0.4058		1.00	0.0100	0.4	50.0
Trichloroethene	Ave	0.3397	0.3347		1.00	0.0100	-1.5	50.0
Methylcyclohexane	Ave	0.5006	0.5473		1.00	0.0100	9.3	50.0
1,2-Dichloropropane	Ave	0.3010	0.2966		1.00	0.0100	-1.5	20.0
Dibromomethane	Ave	0.1618	0.1715		1.00	0.0100	6.0	50.0
Bromodichloromethane	Ave	0.3013	0.3059		1.00	0.0100	1.5	50.0
2-Chloroethyl vinyl ether	Ave	0.1193	0.1081		10.0	0.0100	-9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.2826		1.00	0.0100	-20.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1608		10.0	0.0200	5.0	50.0
Toluene	Ave	2.028	2.055		1.00	0.0100	1.3	20.0
trans-1,3-Dichloropropene	Lin1		0.3234		1.00	0.0100	-20.9	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3026		1.00	0.0100	-6.4	50.0
Tetrachloroethene	Ave	0.3905	0.3729		1.00	0.0100	-4.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5712		1.00	0.0100	-3.2	50.0
2-Hexanone	Ave	0.1436	0.1562		10.0	0.0200	8.8	50.0
Dibromochloromethane	Lin1		0.2410		1.00	0.0100	-21.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.3045		1.00	0.0100	-0.1	50.0
Chlorobenzene	Ave	1.276	1.287	0.3000	1.00	0.0100	0.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3671		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.7059		1.00	0.0100	5.4	20.0
m-Xylene & p-Xylene	Ave	1.626	1.762		2.00	0.0200	8.3	50.0
o-Xylene	Ave	0.8173	0.9066		1.00	0.0100	10.9	50.0
Styrene	Lin1		1.454		1.00	0.0100	-0.1	50.0
Bromoform	Lin1		0.1234	0.1000	1.00	0.0100	-20.3	50.0
Isopropylbenzene	Ave	1.984	2.244		1.00	0.0100	13.1	50.0
Bromobenzene	Ave	0.9263	0.8726		1.00	0.0100	-5.8	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6194	0.3000	1.00	0.0100	-10.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1915		1.00	0.0100	-13.2	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0862		1.00	0.0200	-7.6	50.0
n-Propylbenzene	Ave	0.9249	0.9564		1.00	0.0100	3.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8704		1.00	0.0100	-1.6	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.869		1.00	0.0100	5.1	50.0
4-Chlorotoluene	Ave	2.918	2.862		1.00	0.0100	-1.9	50.0
tert-Butylbenzene	Ave	2.268	2.336		1.00	0.0100	3.0	50.0
1,2,4-Trimethylbenzene	Ave	2.853	3.027		1.00	0.0100	6.1	50.0
sec-Butylbenzene	Ave	3.298	3.499		1.00	0.0100	6.1	50.0
1,3-Dichlorobenzene	Ave	1.741	1.755		1.00	0.0100	0.8	50.0
p-Isopropyltoluene	Ave	2.821	3.116		1.00	0.0100	10.5	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.709		1.00	0.0100	2.1	50.0
n-Butylbenzene	Ave	2.489	2.779		1.00	0.0100	11.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0607		2.00	0.0100	-11.4	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7228		1.00	0.0100	-4.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4851		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.287		1.00	0.0100	-16.2	50.0
1,2,3-Trichlorobenzene	Ave	0.6565	0.6321		1.00	0.0100	-3.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.3017		0.00858	0.00890	-3.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.667	1.608		0.00858	0.00890	-3.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5350		0.00918	0.00890	3.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3178	0.3272		2.00	0.0100	3.0	50.0
Diisopropyl ether	Ave	0.2893	0.2870		10.0	0.0100	-0.8	50.0
Isobutyl alcohol	Ave	0.0041	0.0047		50.0	0.500	14.7	50.0
Cyclohexanone	Ave	0.0865	0.0130		20.0	0.200	-85.0*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.219		0.0106	0.0100	5.7	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab File ID: UXC0750.D BFB Injection Date: 04/12/2013

Instrument ID: A3UX15 BFB Injection Time: 21:04

Analysis Batch No.: 81772

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.4	
75	30.0 - 60.0 % of mass 95	51.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.9	
173	Less than 2.0 % of mass 174	0.5	(0.6)1
174	50.0 - 120.00 % of mass 95	93.4	
175	5.0 - 9.0 % of mass 174	6.2	(6.7)1
176	95.0 - 101.0 % of mass 174	90.8	(97.2)1
177	5.0 - 9.0 % of mass 176	5.9	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-81772/2	UXC0752.D	04/12/2013	21:48
	CCV 240-81772/3	UXC0753.D	04/12/2013	22:11
	LCS 240-81772/4	UXC0754.D	04/12/2013	22:33
	MB 240-81772/5	UXC0755.D	04/12/2013	22:55
TB-040513	240-22881-1	UXC0757.D	04/12/2013	23:40
MRC-MW08A-040513	240-22881-2	UXC0758.D	04/13/2013	00:02
MRC-MW08B-040513	240-22881-3	UXC0759.D	04/13/2013	00:24
MRC-MW-19A-040513	240-22881-6	UXC0760.D	04/13/2013	00:46
MRC-MW-109A-040513	240-22881-9	UXC0761.D	04/13/2013	01:09
MRC-MW-109A-040513 MS	240-22881-9 MS	UXC0762.D	04/13/2013	01:32
MRC-MW-109A-040513 MSD	240-22881-9 MSD	UXC0763.D	04/13/2013	01:54

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCVIS 240-81772/2 Calibration Date: 04/12/2013 21:48

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0752.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3755		1.00	0.0100	-3.9	50.0
Chloromethane	Ave	0.5133	0.5596	0.1000	1.00	0.0100	9.0	50.0
Vinyl chloride	Ave	0.5765	0.5834		1.00	0.0100	1.2	20.0
Bromomethane	Ave	0.3951	0.4516		1.00	0.0100	14.3	50.0
Chloroethane	Ave	0.3438	0.4144		1.00	0.0100	20.5	50.0
Trichlorofluoromethane	Ave	0.5693	0.5973		1.00	0.0100	4.9	50.0
~~Acrolein~~	Qua		~~0.0428~~		20.0	0.100	13.1	50.0
1,1-Dichloroethene	Ave	0.3445	0.3794		1.00	0.0100	10.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.2951		1.00	0.0100	12.2	50.0
Acetone	Qua		0.0691		10.0	0.0200	-8.7	50.0
Iodomethane	Ave	0.4958	0.5710		1.00	0.0100	15.2	50.0
Carbon disulfide	Ave	0.7463	0.8852		1.00	0.0100	18.6	50.0
~~Acetonitrile~~	Ave	0.0282	~~0.0320~~		20.0	0.100	13.7	50.0
Methyl acetate	Ave	0.1586	0.1621		10.0	0.0200	2.2	50.0
Methylene Chloride	Lin1		0.4459		1.00	0.0100	17.2	50.0
tert-Butyl alcohol	Ave	0.0097	0.0080		50.0	0.200	-17.1	50.0
Acrylonitrile	Ave	0.0871	0.0867		20.0	0.0200	-0.5	50.0
Methyl tert-butyl ether	Ave	0.6313	0.5989		1.00	0.0100	-5.1	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3572		1.00	0.0100	0.1	50.0
Hexane	Ave	0.0668	0.0647		1.00	0.0100	-3.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.5814	0.1000	1.00	0.0100	1.1	50.0
Vinyl acetate	Ave	0.0383	0.0281		2.00	0.0100	-26.6	50.0
2,2-Dichloropropane	Ave	0.2770	0.2386		1.00	0.0100	-13.9	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.3529		1.00	0.0100	-6.4	50.0
2-Butanone	Ave	0.0910	0.0860		10.0	0.0200	-5.5	50.0
Bromochloromethane	Ave	0.1662	0.1629		1.00	0.0100	-2.0	50.0
~~Tetrahydrofuran~~	Lin1		~~0.0494~~		5.00	0.0100	-1.5	50.0
Chloroform	Ave	0.5671	0.5738		1.00	0.0100	1.2	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4132		1.00	0.0100	0.3	50.0
Cyclohexane	Ave	0.5423	0.5632		1.00	0.0100	3.8	50.0
1,1-Dichloropropene	Ave	0.4381	0.4142		1.00	0.0100	-5.5	50.0
Carbon tetrachloride	Ave	0.3243	0.3151		1.00	0.0100	-2.8	50.0
Benzene	Ave	1.387	1.305		1.00	0.0100	-6.0	50.0
1,2-Dichloroethane	Ave	0.4040	0.3801		1.00	0.0100	-5.9	50.0
Trichloroethene	Ave	0.3397	0.2919		1.00	0.0100	-14.1	50.0
Methylcyclohexane	Ave	0.5006	0.4791		1.00	0.0100	-4.3	50.0
1,2-Dichloropropane	Ave	0.3010	0.3011		1.00	0.0100	0.0	20.0
Dibromomethane	Ave	0.1618	0.1484		1.00	0.0100	-8.3	50.0
~~1,4-Dioxane~~	Lin1		~~0.0079~~		50.0	0.500	~~-29.0~~	50.0
Bromodichloromethane	Ave	0.3013	0.2649		1.00	0.0100	-12.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCVIS 240-81772/2 Calibration Date: 04/12/2013 21:48

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0752.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1049		10.0	0.0200	-12.1	50.0
cis-1,3-Dichloropropene	Lin1		0.2710		1.00	0.0100	-23.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1527		10.0	0.0200	-0.3	50.0
Toluene	Ave	2.028	1.838		1.00	0.0100	-9.3	20.0
trans-1,3-Dichloropropene	Lin1		0.2746		1.00	0.0100	-31.8	50.0
~~Ethyl methacrylate~~	Lin1		0.2957		1.00	0.0100	~~-21.2~~	50.0
~~1,1,2-Trichloroethane~~	Ave	0.3232	0.2797		1.00	0.0100	-13.4	50.0
Tetrachloroethene	Ave	0.3905	0.3345		1.00	0.0100	-14.4	50.0
1,3-Dichloropropane	Ave	0.5899	0.5212		1.00	0.0100	-11.6	50.0
2-Hexanone	Ave	0.1436	0.1475		10.0	0.0200	2.7	50.0
~~Dibromochloromethane~~	Lin1		0.2145		1.00	0.0100	~~-29.6~~	50.0
1,2-Dibromoethane	Ave	0.3048	0.2661		1.00	0.0100	-12.7	50.0
Chlorobenzene	Ave	1.276	1.119	0.3000	1.00	0.0100	-12.3	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3194		1.00	0.0100	-9.6	50.0
Ethylbenzene	Ave	0.6700	0.6088		1.00	0.0100	-9.1	20.0
m-Xylene & p-Xylene	Ave	1.626	1.546		2.00	0.0200	-5.0	50.0
o-Xylene	Ave	0.8173	0.7606		1.00	0.0100	-6.9	50.0
Styrene	Lin1		1.268		1.00	0.0100	-12.3	50.0
Bromoform	Lin1		0.1032	0.1000	1.00	0.0100	-32.3	50.0
Isopropylbenzene	Ave	1.984	1.839		1.00	0.0100	-7.3	50.0
Bromobenzene	Ave	0.9263	0.7470		1.00	0.0100	-19.4	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.5612	0.3000	1.00	0.0100	-18.8	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1746		1.00	0.0100	-20.9	50.0
n-Propylbenzene	Ave	0.9249	0.7958		1.00	0.0100	-14.0	50.0
~~trans-1,4-Dichloro-2-butene~~	Qua		0.0149		1.00	0.0100	~~-76.0*~~	50.0
2-Chlorotoluene	Ave	0.8847	0.7431		1.00	0.0100	-16.0	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.477		1.00	0.0100	-9.3	50.0
4-Chlorotoluene	Ave	2.918	2.549		1.00	0.0100	-12.7	50.0
tert-Butylbenzene	Ave	2.268	1.911		1.00	0.0100	-15.8	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.569		1.00	0.0100	-9.9	50.0
sec-Butylbenzene	Ave	3.298	2.930		1.00	0.0100	-11.2	50.0
1,3-Dichlorobenzene	Ave	1.741	1.505		1.00	0.0100	-13.5	50.0
p-Isopropyltoluene	Ave	2.821	2.524		1.00	0.0100	-10.5	50.0
1,4-Dichlorobenzene	Ave	1.894	1.581		1.00	0.0100	-16.5	50.0
1,2-Dichlorobenzene	Ave	1.674	1.459		1.00	0.0100	-12.9	50.0
n-Butylbenzene	Ave	2.489	2.231		1.00	0.0100	-10.4	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0426		2.00	0.0100	-37.8	50.0
1,3,5-Trichlorobenzene	Ave	1.071	0.8950		1.00	0.0100	-16.4	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.5553		1.00	0.0100	-26.4	50.0
Hexachlorobutadiene	Ave	0.5612	0.4044		1.00	0.0100	-28.0	50.0
Naphthalene	Lin1		0.9433		1.00	0.0100	-37.3	50.0

FORM VII 8260B

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCVIS 240-81772/2 Calibration Date: 04/12/2013 21:48

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0752.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.4674		1.00	0.0100	-28.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2851		0.00871	0.00890	-2.1	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.3130		0.00891	0.00890	0.0	50.0
Toluene-d8 (Surr)	Ave	1.667	1.636		0.00874	0.00890	-1.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5675		0.00974	0.00890	9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCV 240-81772/3 Calibration Date: 04/12/2013 22:11

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0753.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.8961		2.00	0.0100	4.4	50.0
Ethyl ether	Ave	0.3178	0.2877		2.00	0.0100	-9.5	50.0
3-Chloro-1-propene	Ave	0.1476	0.1398		2.00	0.0100	-5.3	50.0
Diisopropyl ether	Ave	0.2893	0.2915		10.0	0.0500	0.8	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.4803		2.00	0.0100	-5.4	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6406		5.00	0.0100	-0.0	50.0
Ethyl acetate	Ave	0.1470	0.1353		4.00	0.0200	-8.0	50.0
Propionitrile	Ave	0.0282	0.0287		4.00	0.0200	1.8	50.0
Methacrylonitrile	Ave	0.1169	0.1069		2.00	0.0100	-8.6	50.0
Isobutyl alcohol	Ave	0.0041	0.0044		50.0	0.200	7.3	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.4655		5.00	0.0100	-4.1	50.0
n-Heptane	Ave	0.0670	0.0567		1.00	0.0100	-15.4	50.0
n-Butanol	Ave	0.0027	0.0025		50.0	0.200	-5.1	50.0
Methyl methacrylate	Ave	0.1349	0.1361		2.00	0.0100	0.9	50.0
2-Nitropropane	Ave	0.0194	0.0173		2.00	0.0200	-11.0	50.0
Cyclohexanone	Ave	0.0865	0.0436		20.0	0.100	-49.6	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.111		0.0102	0.0100	2.1	50.0
2-Methylnaphthalene	Qua		0.1364		5.00	0.0200	-60.8*	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab File ID: UXC0755.D Lab Sample ID: MB 240-81772/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/12/2013 22:55

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81772/4	UXC0754.D	04/12/2013 22:33
TB-040513	240-22881-1	UXC0757.D	04/12/2013 23:40
MRC-MW08A-040513	240-22881-2	UXC0758.D	04/13/2013 00:02
MRC-MW08B-040513	240-22881-3	UXC0759.D	04/13/2013 00:24
MRC-MW-19A-040513	240-22881-6	UXC0760.D	04/13/2013 00:46
MRC-MW-109A-040513	240-22881-9	UXC0761.D	04/13/2013 01:09
MRC-MW-109A-040513 MS	240-22881-9 MS	UXC0762.D	04/13/2013 01:32
MRC-MW-109A-040513 MSD	240-22881-9 MSD	UXC0763.D	04/13/2013 01:54

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81772/5

Matrix: Water Lab File ID: UXC0755.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/12/2013 22:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81772/5

Matrix: Water Lab File ID: UXC0755.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/12/2013 22:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81772/5

Matrix: Water Lab File ID: UXC0755.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/12/2013 22:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-81772/5

Matrix: Water Lab File ID: UXC0755.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/12/2013 22:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 81772 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0754.D

Lab ID: LCS 240-81772/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	17.2	86	43-136	
Benzene	10.0	10.7	107	83-112	
Bromobenzene	10.0	8.69	87	76-115	
Bromochloromethane	10.0	9.72	97	77-120	
Bromodichloromethane	10.0	9.97	100	72-121	
Bromoform	10.0	6.76	68	40-131	
Bromomethane	10.0	8.92	89	11-185	
2-Butanone	20.0	20.7	104	60-126	
Carbon disulfide	10.0	11.8	118	62-142	
Carbon tetrachloride	10.0	10.5	105	66-128	
Chlorobenzene	10.0	9.63	96	85-110	
Chloroethane	10.0	10.6	106	25-153	
2-Chloroethyl vinyl ether	10.0	9.00 J	90	52-131	
Chloroform	10.0	10.7	107	79-117	
Chloromethane	10.0	9.47	95	44-126	
2-Chlorotoluene	10.0	9.11	91	76-116	
4-Chlorotoluene	10.0	9.08	91	77-115	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.21	82	61-115	
Dibromochloromethane	10.0	7.17	72	64-119	
1,2-Dibromo-3-Chloropropane	10.0	6.48	65	42-136	
1,2-Dibromoethane	10.0	9.48	95	79-113	
Dibromomethane	10.0	10.4	104	81-120	
1,2-Dichlorobenzene	10.0	9.05	90	81-110	
1,3-Dichlorobenzene	10.0	9.06	91	80-110	
1,4-Dichlorobenzene	10.0	8.76	88	82-110	
Dichlorodifluoromethane	10.0	6.15	62	19-129	
1,1-Dichloroethane	10.0	11.0	110	82-115	
1,2-Dichloroethane	10.0	10.1	101	71-127	
1,1-Dichloroethene	10.0	11.1	111	78-131	
1,2-Dichloropropane	10.0	10.6	106	81-115	
1,3-Dichloropropane	10.0	9.30	93	79-116	
2,2-Dichloropropane	10.0	9.52	95	50-129	
1,1-Dichloropropene	10.0	9.95	100	83-114	
Diisopropyl ether	10.0	9.89	99	77-118	
Ethylbenzene	10.0	10.1	101	83-112	
Hexachlorobutadiene	10.0	7.17	72	36-134	
2-Hexanone	20.0	20.3	102	55-133	
Isopropylbenzene	10.0	9.87	99	75-114	
Methylene Chloride	10.0	12.0	120	66-131	
4-Methyl-2-pentanone	20.0	20.5	102	63-128	
Methyl tert-butyl ether	10.0	9.85	98	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0754.D

Lab ID: LCS 240-81772/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.8	104	83-113	
Naphthalene	10.0	6.33	63	32-141	
n-Butylbenzene	10.0	9.60	96	66-125	
n-Propylbenzene	10.0	9.51	95	74-121	
o-Xylene	10.0	10.2	102	83-113	
p-Isopropyltoluene	10.0	9.77	98	74-120	
sec-Butylbenzene	10.0	9.20	92	70-117	
Styrene	10.0	9.49	95	79-114	
tert-Butyl alcohol	200	186	93	70-130	
tert-Butylbenzene	10.0	9.23	92	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.18	92	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.24	82	68-118	
Tetrachloroethene	10.0	8.98	90	79-114	
Toluene	10.0	9.70	97	84-111	
trans-1,2-Dichloroethene	10.0	10.4	104	83-117	
trans-1,3-Dichloropropene	10.0	7.46	75	58-117	
1,2,3-Trichlorobenzene	10.0	7.50	75	54-126	
1,2,4-Trichlorobenzene	10.0	7.12	71	48-135	
1,1,1-Trichloroethane	10.0	10.2	102	74-118	
Trichloroethene	10.0	9.80	98	76-117	
Trichlorofluoromethane	10.0	9.66	97	49-157	
1,2,3-Trichloropropane	10.0	8.06	81	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.2	112	74-151	
1,2,3-Trimethylbenzene	10.0	9.52	95	70-130	
1,2,4-Trimethylbenzene	10.0	9.74	97	76-120	
Vinyl acetate	10.0	7.21	72	46-161	
Vinyl chloride	10.0	8.95	90	53-127	
Xylenes, Total	30.0	31.0	103	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0762.D

Lab ID: 240-22881-9 MS Client ID: MRC-MW-109A-040513 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	100	25 U	91.7	92	33-145	
Benzene	50.0	5.0 U	51.4	103	72-121	
Bromobenzene	50.0	5.0 U	42.7	85	71-116	
Bromochloromethane	50.0	5.0 U	47.6	95	73-121	
Bromodichloromethane	50.0	5.0 U	48.2	96	67-120	
Bromoform	50.0	5.0 U	35.5	71	32-128	
Bromomethane	50.0	5.0 U	39.7	79	10-186	
2-Butanone	100	25 U	91.4	91	54-129	
Carbon disulfide	50.0	5.0 U	56.4	113	57-147	
Carbon tetrachloride	50.0	5.0 U	47.4	95	59-129	
Chlorobenzene	50.0	5.0 U	47.5	95	80-110	
Chloroethane	50.0	5.0 U	46.8	94	21-165	
2-Chloroethyl vinyl ether	50.0	50 U	50 U	0	10-150	F
Chloroform	50.0	5.0 U	50.7	101	76-118	
Chloromethane	50.0	5.0 U	41.7	83	33-132	
2-Chlorotoluene	50.0	5.0 U	43.9	88	69-117	
4-Chlorotoluene	50.0	5.0 U	45.0	90	71-116	
cis-1,2-Dichloroethene	50.0	110	160	95	70-120	
cis-1,3-Dichloropropene	50.0	5.0 U	36.7	73	51-110	
Dibromochloromethane	50.0	5.0 U	37.2	74	56-118	
1,2-Dibromo-3-Chloropropane	50.0	25 U	33.3	67	32-139	
1,2-Dibromoethane	50.0	5.0 U	47.2	94	74-113	
Dibromomethane	50.0	5.0 U	49.8	100	77-121	
1,2-Dichlorobenzene	50.0	5.0 U	46.1	92	75-111	
1,3-Dichlorobenzene	50.0	5.0 U	44.3	89	73-110	
1,4-Dichlorobenzene	50.0	5.0 U	43.5	87	75-110	
Dichlorodifluoromethane	50.0	5.0 U	28.8	58	17-128	
1,1-Dichloroethane	50.0	5.0 U	52.8	106	79-116	
1,2-Dichloroethane	50.0	5.0 U	49.1	98	68-129	
1,1-Dichloroethene	50.0	5.1	56.2	102	74-135	
1,2-Dichloropropane	50.0	5.0 U	49.2	98	78-115	
1,3-Dichloropropane	50.0	5.0 U	47.5	95	74-118	
2,2-Dichloropropane	50.0	5.0 U	42.7	85	38-127	
1,1-Dichloropropene	50.0	5.0 U	49.6	99	80-114	
Diisopropyl ether	50.0	25 U	46.1	92	73-118	
Ethylbenzene	50.0	5.0 U	50.4	101	75-116	
Hexachlorobutadiene	50.0	5.0 U	35.6	71	27-132	
2-Hexanone	100	25 U	95.4	95	47-139	
Isopropylbenzene	50.0	5.0 U	50.7	101	68-116	
Methylene Chloride	50.0	5.0 U	53.8	108	63-128	
4-Methyl-2-pentanone	100	25 U	99.8	100	56-131	
Methyl tert-butyl ether	50.0	5.0 U	45.6	91	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0762.D

Lab ID: 240-22881-9 MS Client ID: MRC-MW-109A-040513 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	100	10 U	105	105	75-117	
Naphthalene	50.0	5.0 U	30.1	60	15-158	
n-Butylbenzene	50.0	5.0 U	46.0	92	56-127	
n-Propylbenzene	50.0	5.0 U	45.3	91	64-124	
o-Xylene	50.0	5.0 U	50.5	101	76-116	
p-Isopropyltoluene	50.0	5.0 U	47.5	95	64-122	
sec-Butylbenzene	50.0	5.0 U	44.3	89	60-119	
Styrene	50.0	5.0 U	47.2	94	71-117	
tert-Butyl alcohol	1000	100 U	834	83	70-130	
tert-Butylbenzene	50.0	5.0 U	44.7	89	61-119	
1,1,1,2-Tetrachloroethane	50.0	5.0 U	48.3	97	64-118	
1,1,2,2-Tetrachloroethane	50.0	5.0 U	40.9	82	63-122	
Tetrachloroethene	50.0	5.0 U	45.1	90	70-117	
Toluene	50.0	5.0 U	49.3	99	78-114	
trans-1,2-Dichloroethene	50.0	2.5 J	52.3	100	80-119	
trans-1,3-Dichloropropene	50.0	5.0 U	38.5	77	46-116	
1,2,3-Trichlorobenzene	50.0	5.0 U	36.2	72	45-129	
1,2,4-Trichlorobenzene	50.0	5.0 U	34.8	70	38-138	
1,1,1-Trichloroethane	50.0	5.0 U	47.7	95	68-121	
Trichloroethene	50.0	5.0 U	45.7	91	66-120	
Trichlorofluoromethane	50.0	5.0 U	42.7	85	46-157	
1,2,3-Trichloropropane	50.0	5.0 U	41.0	82	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	50.0	5.0 U	53.2	106	70-152	
1,2,3-Trimethylbenzene	50.0	25 U	47.3	95	70-130	
1,2,4-Trimethylbenzene	50.0	5.0 U	47.1	94	67-124	
Vinyl acetate	50.0	10 U	37.3	75	43-157	
Vinyl chloride	50.0	55	90.5	71	49-130	
Xylenes, Total	150	10 U	156	104	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0763.D

Lab ID: 240-22881-9 MSD Client ID: MRC-MW-109A-040513 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	100	93.1	93	2	30	33-145	
Benzene	50.0	51.2	102	0	30	72-121	
Bromobenzene	50.0	43.6	87	2	30	71-116	
Bromochloromethane	50.0	47.5	95	0	30	73-121	
Bromodichloromethane	50.0	47.8	96	1	30	67-120	
Bromoform	50.0	36.4	73	2	30	32-128	
Bromomethane	50.0	40.6	81	2	30	10-186	
2-Butanone	100	94.1	94	3	30	54-129	
Carbon disulfide	50.0	58.0	116	3	30	57-147	
Carbon tetrachloride	50.0	50.7	101	7	30	59-129	
Chlorobenzene	50.0	48.3	97	2	30	80-110	
Chloroethane	50.0	48.1	96	3	30	21-165	
2-Chloroethyl vinyl ether	50.0	50 U	0	NC	30	10-150	F
Chloroform	50.0	51.8	104	2	30	76-118	
Chloromethane	50.0	43.8	88	5	30	33-132	
2-Chlorotoluene	50.0	44.8	90	2	30	69-117	
4-Chlorotoluene	50.0	45.3	91	1	30	71-116	
cis-1,2-Dichloroethene	50.0	156	88	2	30	70-120	
cis-1,3-Dichloropropene	50.0	36.6	73	0	30	51-110	
Dibromochloromethane	50.0	38.1	76	2	30	56-118	
1,2-Dibromo-3-Chloropropane	50.0	37.5	75	12	30	32-139	
1,2-Dibromoethane	50.0	47.5	95	1	30	74-113	
Dibromomethane	50.0	49.4	99	1	30	77-121	
1,2-Dichlorobenzene	50.0	45.9	92	0	30	75-111	
1,3-Dichlorobenzene	50.0	46.6	93	5	30	73-110	
1,4-Dichlorobenzene	50.0	44.8	90	3	30	75-110	
Dichlorodifluoromethane	50.0	30.6	61	6	30	17-128	
1,1-Dichloroethane	50.0	53.7	107	2	30	79-116	
1,2-Dichloroethane	50.0	50.4	101	3	30	68-129	
1,1-Dichloroethene	50.0	56.5	103	0	30	74-135	
1,2-Dichloropropane	50.0	51.7	103	5	30	78-115	
1,3-Dichloropropane	50.0	48.5	97	2	30	74-118	
2,2-Dichloropropane	50.0	44.1	88	3	30	38-127	
1,1-Dichloropropene	50.0	49.1	98	1	30	80-114	
Diisopropyl ether	50.0	47.6	95	3	30	73-118	
Ethylbenzene	50.0	50.1	100	1	30	75-116	
Hexachlorobutadiene	50.0	36.6	73	3	30	27-132	
2-Hexanone	100	106	106	11	30	47-139	
Isopropylbenzene	50.0	52.2	104	3	30	68-116	
Methylene Chloride	50.0	54.3	109	1	30	63-128	
4-Methyl-2-pentanone	100	99.0	99	1	30	56-131	
Methyl tert-butyl ether	50.0	46.6	93	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0763.D

Lab ID: 240-22881-9 MSD Client ID: MRC-MW-109A-040513 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	100	105	105	0	30	75-117	
Naphthalene	50.0	32.2	64	7	30	15-158	
n-Butylbenzene	50.0	49.3	99	7	30	56-127	
n-Propylbenzene	50.0	46.2	92	2	30	64-124	
o-Xylene	50.0	52.6	105	4	30	76-116	
p-Isopropyltoluene	50.0	49.5	99	4	30	64-122	
sec-Butylbenzene	50.0	47.8	96	8	30	60-119	
Styrene	50.0	47.5	95	1	30	71-117	
tert-Butyl alcohol	1000	857	86	3	30	70-130	
tert-Butylbenzene	50.0	46.7	93	4	30	61-119	
1,1,1,2-Tetrachloroethane	50.0	50.5	101	4	30	64-118	
1,1,2,2-Tetrachloroethane	50.0	41.9	84	2	30	63-122	
Tetrachloroethene	50.0	46.2	92	2	30	70-117	
Toluene	50.0	50.0	100	2	30	78-114	
trans-1,2-Dichloroethene	50.0	54.7	105	5	30	80-119	
trans-1,3-Dichloropropene	50.0	39.4	79	2	30	46-116	
1,2,3-Trichlorobenzene	50.0	37.4	75	3	30	45-129	
1,2,4-Trichlorobenzene	50.0	36.8	74	6	30	38-138	
1,1,1-Trichloroethane	50.0	49.7	99	4	30	68-121	
Trichloroethene	50.0	47.9	96	5	30	66-120	
Trichlorofluoromethane	50.0	44.3	89	4	30	46-157	
1,2,3-Trichloropropane	50.0	42.9	86	4	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	50.0	53.8	108	1	30	70-152	
1,2,3-Trimethylbenzene	50.0	48.0	96	1	30	70-130	
1,2,4-Trimethylbenzene	50.0	49.3	99	4	30	67-124	
Vinyl acetate	50.0	41.0	82	9	30	43-157	
Vinyl chloride	50.0	91.4	73	1	30	49-130	
Xylenes, Total	150	158	105	1	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-040513	240-22881-1	93	105	92	80
MRC-MW08A-040513	240-22881-2	94	106	87	84
MRC-MW08B-040513	240-22881-3	93	110	86	84
MRC-MW-19A-040513	240-22881-6	94	107	91	83
MRC-MW-109A-040513	240-22881-9	93	104	89	84
	MB 240-81772/5	93	104	90	82
	LCS 240-81772/4	99	95	97	101
MRC-MW-109A-040513 MS	240-22881-9 MS	97	93	99	105
MRC-MW-109A-040513 MSD	240-22881-9 MSD	96	95	98	107

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-81772/2		1214654	4.66	866087	7.30	569840	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Sample No.: CCVIS 240-81772/2 Date Analyzed: 04/12/2013 21:48

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0752.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1214654	4.66	866087	7.30	569840	9.51
UPPER LIMIT		2429308	5.16	1732174	7.80	1139680	10.01
LOWER LIMIT		607327	4.16	433044	6.80	284920	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-81772/3		1355656	4.66	930716	7.30	466465	9.51
LCS 240-81772/4		1377554	4.66	985611	7.30	630930	9.51
MB 240-81772/5		1261049	4.66	942952	7.30	417626	9.51
240-22881-1	TB-040513	1298073	4.66	926302	7.30	403937	9.51
240-22881-2	MRC-MW08A-040513	1127977	4.66	856124	7.30	408198	9.51
240-22881-3	MRC-MW08B-040513	1147786	4.66	863110	7.30	405472	9.51
240-22881-6	MRC-MW-19A-040513	1204349	4.66	862240	7.30	402230	9.51
240-22881-9	MRC-MW-109A-040513	1215131	4.66	861464	7.30	394897	9.51
240-22881-9 MS	MRC-MW-109A-040513 MS	1431629	4.66	937918	7.30	620083	9.51
240-22881-9 MSD	MRC-MW-109A-040513 MSD	1428102	4.66	913412	7.30	604882	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab File ID: 0414001.D DFTPP Injection Date: 04/14/2013

Instrument ID: A4AG2 DFTPP Injection Time: 16:31

Analysis Batch No.: 81858

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	43.0	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	55.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	23.7	
365	Greater than 0.75% of mass 198	2.7	
441	Present, but less than mass 443	10.2	
442	40.0 - 110.0% of mass 198	70.2	
443	15.0 - 24.0% of mass 442	14.2	(20.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-81858/10	0414010.D	04/14/2013	19:42
	STD8 240-81858/11	0414011.D	04/14/2013	20:03
	STD7 240-81858/12	0414012.D	04/14/2013	20:25
	STD6 240-81858/13	0414013.D	04/14/2013	20:47
	STD5 240-81858/14	0414014.D	04/14/2013	21:09
	STD4 240-81858/15	0414015.D	04/14/2013	21:30
	STD3 240-81858/16	0414016.D	04/14/2013	21:52
	STD2 240-81858/17	0414017.D	04/14/2013	22:14
	STD1 240-81858/18	0414018.D	04/14/2013	22:36
	ICV 240-81858/19	0414019.D	04/14/2013	22:57
	MB 240-81444/22-A	0414028.D	04/15/2013	02:13
	LCS 240-81444/23-A	0414029.D	04/15/2013	02:35

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 81858

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/14/2013 19:42 Calibration End Date: 04/14/2013 22:36 Calibration ID: 14488

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81858/18	0414018.D
Level 2	STD2 240-81858/17	0414017.D
Level 3	STD3 240-81858/16	0414016.D
Level 4	STD4 240-81858/15	0414015.D
Level 5	STD5 240-81858/14	0414014.D
Level 6	STD6 240-81858/13	0414013.D
Level 7	STD7 240-81858/12	0414012.D
Level 8	STD8 240-81858/11	0414011.D
Level 9	STD9 240-81858/10	0414010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4434	0.4721 0.4543	0.4274 0.4854	0.4091 0.4823	0.4673	Ave		0.4552				5.9		20.0			
N-Nitrosodimethylamine	0.6514	0.6353 0.6662	0.6388 0.7114	0.6767 0.6938	0.6841	Ave		0.6697				4.0		20.0			
Pyridine	1.1064	1.1646 1.1501	1.1030 1.2099	1.0989 1.1901	1.1281	Ave		1.1439				3.7		20.0			
Benzaldehyde	1.0672 0.9547	0.9989 0.9588	1.0195 0.9990	0.9818 0.9365	0.9833	Ave		0.9889			0.0100	3.9		20.0			
Phenol	1.4926	1.4491 1.5003	1.5168 1.6188	1.4908 1.5407	1.5121	Ave		1.5152			0.8000	3.3		20.0			
Aniline	1.8868	1.7530 1.9288	1.9028 2.0539	1.8746 1.9879	1.8864	Ave		1.9093				4.6		20.0			
Bis(2-chloroethyl)ether	1.1958	1.1992 1.2196	1.2463 1.2997	1.1983 1.2534	1.2191	Ave		1.2289			0.7000	2.9		20.0			
2-Chlorophenol	1.2346	1.1604 1.2567	1.2266 1.3519	1.2067 1.3009	1.2361	Ave		1.2467			0.8000	4.7		20.0			
1,3-Dichlorobenzene	1.3298	1.3123 1.3317	1.3348 1.4319	1.3291 1.3852	1.3217	Ave		1.3471				3.0		20.0			
1,4-Dichlorobenzene	1.3398	1.3102 1.3474	1.3734 1.4478	1.3489 1.4068	1.3758	Ave		1.3687				3.1		20.0			
Benzyl alcohol	0.8177	0.7572 0.8130	0.7817 0.8802	0.7923 0.8594	0.8192	Ave		0.8151				4.9		20.0			
1,2-Dichlorobenzene	1.2919	1.3509 1.3030	1.3296 1.3773	1.2889 1.3470	1.3181	Ave		1.3258				2.4		20.0			
2-Methylphenol	1.1360	1.1174 1.1326	1.1350 1.2301	1.1299 1.1967	1.1453	Ave		1.1529			0.7000	3.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICV 240-81858/19 Calibration Date: 04/14/2013 22:57

Instrument ID: A4AG2 Calib Start Date: 04/14/2013 19:42

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/14/2013 22:36

Lab File ID: 0414019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4552	0.4601		10.1	10.0	1.1	30.0
N-Nitrosodimethylamine	Ave	0.6697	0.6783		10.1	10.0	1.3	30.0
Pyridine	Ave	1.144	1.170		10.2	10.0	2.2	30.0
Benzaldehyde	Ave	0.9889	1.003	0.0100	20.3	20.0	1.4	30.0
Phenol	Ave	1.515	1.605	0.8000	10.6	10.0	5.9	30.0
Aniline	Ave	1.909	2.027		10.6	10.0	6.2	30.0
Bis(2-chloroethyl)ether	Ave	1.229	1.279	0.7000	10.4	10.0	4.1	30.0
2-Chlorophenol	Ave	1.247	1.321	0.8000	10.6	10.0	6.0	30.0
1,3-Dichlorobenzene	Ave	1.347	1.410		10.5	10.0	4.6	30.0
1,4-Dichlorobenzene	Ave	1.369	1.436		10.5	10.0	4.9	30.0
Benzyl alcohol	Ave	0.8151	0.8988		11.0	10.0	10.3	30.0
1,2-Dichlorobenzene	Ave	1.326	1.377		10.4	10.0	3.9	30.0
2-Methylphenol	Ave	1.153	1.247	0.7000	10.8	10.0	8.2	30.0
bis (2-chloroisopropyl) ether	Ave	1.297	1.327		7.37	7.20	2.3	30.0
Indene	Ave	2.191	2.314		21.1	20.0	5.6	30.0
3 & 4 Methylphenol	Ave	1.205	1.288		10.7	10.0	6.9	30.0
N-Nitrosodi-n-propylamine	Ave	0.8595	0.8999	0.5000	10.5	10.0	4.7	30.0
Acetophenone	Ave	1.693	1.798	0.0100	10.6	10.0	6.2	30.0
Hexachloroethane	Ave	0.5338	0.5725	0.3000	10.7	10.0	7.2	30.0
Nitrobenzene	Ave	0.3191	0.3369	0.2000	10.6	10.0	5.6	30.0
Isophorone	Ave	0.5841	0.6611	0.4000	11.3	10.0	13.2	30.0
2-Nitrophenol	Ave	0.1576	0.1746	0.1000	11.1	10.0	10.8	30.0
2,4-Dimethylphenol	Ave	0.3021	0.3125	0.2000	10.3	10.0	3.5	30.0
Benzoic acid	Qua		0.1606		23.1	20.0	15.6	30.0
Bis(2-chloroethoxy)methane	Ave	0.3771	0.3861	0.3000	10.2	10.0	2.4	30.0
2,4-Dichlorophenol	Ave	0.2448	0.2649	0.2000	10.8	10.0	8.2	30.0
1,2,4-Trichlorobenzene	Ave	0.2720	0.2869		10.5	10.0	5.5	30.0
Naphthalene	Ave	0.9489	0.9936	0.7000	10.5	10.0	4.7	30.0
4-Chloroaniline	Ave	0.4061	0.4200	0.0100	10.3	10.0	3.4	30.0
Hexachlorobutadiene	Ave	0.1435	0.1511	0.0100	10.5	10.0	5.3	30.0
Caprolactam	Ave	0.0903	0.0918	0.0100	20.3	20.0	1.6	30.0
4-Chloro-3-methylphenol	Ave	0.2662	0.2922	0.2000	11.0	10.0	9.7	30.0
2-Methylnaphthalene	Ave	0.6307	0.6553	0.4000	10.4	10.0	3.9	30.0
1-Methylnaphthalene	Ave	0.5903	0.6175		10.5	10.0	4.6	30.0
Hexachlorocyclopentadiene	Ave	0.2394	0.2994	0.0500	12.5	10.0	25.1	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4494	0.4859	0.0100	10.8	10.0	8.1	30.0
2,4,6-Trichlorophenol	Ave	0.2858	0.3325	0.2000	11.6	10.0	16.3	30.0
2,4,5-Trichlorophenol	Ave	0.3108	0.3494	0.2000	11.2	10.0	12.4	30.0
1,1'-Biphenyl	Ave	1.321	1.409	0.0100	10.7	10.0	6.6	30.0
2-Chloronaphthalene	Ave	0.9807	1.041	0.8000	10.6	10.0	6.2	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab File ID: 0415001.D DFTPP Injection Date: 04/15/2013

Instrument ID: A4AG2 DFTPP Injection Time: 08:45

Analysis Batch No.: 81876

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	33.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	41.1	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	25.0 - 75.0% of mass 198	53.9	
197	Less than 1.0% of mass 198	0.1	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.5	
275	10.0- 30.0% of mass 198	24.8	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	11.5	
442	40.0 - 110.0% of mass 198	79.3	
443	15.0 - 24.0% of mass 442	15.7	(19.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-81876/2	0415002.D	04/15/2013	09:06
MRC-MW-18A-040513	240-22881-7	0415009.D	04/15/2013	11:39
MRC-MW-19A-040513	240-22881-6	0415010.D	04/15/2013	12:01
MRC-MW08B-040513	240-22881-3	0415011.D	04/15/2013	12:23
MRC-MW08A-040513	240-22881-2	0415012.D	04/15/2013	12:45
MRC-MW-20A-040513	240-22881-8	0415013.D	04/15/2013	13:07

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab Sample ID: STD6 240-81876/2 Calibration Date: 04/15/2013 09:06

Instrument ID: A4AG2 Calib Start Date: 04/14/2013 19:42

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/14/2013 22:36

Lab File ID: 0415002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4552	0.4533		9.96	10.0	-0.4	20.0
N-Nitrosodimethylamine	Ave	0.6697	0.6441		9.62	10.0	-3.8	20.0
Pyridine	Ave	1.144	1.112		9.72	10.0	-2.8	20.0
Benzaldehyde	Ave	0.9889	0.9537	0.0100	19.3	20.0	-3.6	20.0
Phenol	Ave	1.515	1.472	0.8000	9.71	10.0	-2.9	20.0
Aniline	Ave	1.909	1.878		9.84	10.0	-1.6	20.0
Bis(2-chloroethyl)ether	Ave	1.229	1.197	0.7000	9.74	10.0	-2.6	20.0
2-Chlorophenol	Ave	1.247	1.228	0.8000	9.85	10.0	-1.5	20.0
1,3-Dichlorobenzene	Ave	1.347	1.331		9.88	10.0	-1.2	20.0
1,4-Dichlorobenzene	Ave	1.369	1.346		9.84	10.0	-1.6	20.0
Benzyl alcohol	Ave	0.8151	0.7897		9.69	10.0	-3.1	20.0
1,2-Dichlorobenzene	Ave	1.326	1.267		9.56	10.0	-4.4	20.0
2-Methylphenol	Ave	1.153	1.113	0.7000	9.65	10.0	-3.5	20.0
bis (2-chloroisopropyl) ether	Ave	1.297	1.222		9.43	10.0	-5.7	20.0
Indene	Ave	2.191	2.144		19.6	20.0	-2.1	20.0
3 & 4 Methylphenol	Ave	1.205	1.163		9.65	10.0	-3.5	20.0
N-Nitrosodi-n-propylamine	Ave	0.8595	0.8340	0.5000	9.70	10.0	-3.0	20.0
Acetophenone	Ave	1.693	1.645	0.0100	9.71	10.0	-2.9	20.0
Hexachloroethane	Ave	0.5338	0.5203	0.3000	9.75	10.0	-2.5	20.0
Nitrobenzene	Ave	0.3191	0.3147	0.2000	9.86	10.0	-1.4	20.0
Isophorone	Ave	0.5841	0.5788	0.4000	9.91	10.0	-0.9	20.0
2-Nitrophenol	Ave	0.1576	0.1656	0.1000	10.5	10.0	5.1	20.0
2,4-Dimethylphenol	Ave	0.3021	0.2991	0.2000	9.90	10.0	-1.0	20.0
Benzoic acid	Qua		0.1332		20.5	20.0	2.6	20.0
Bis(2-chloroethoxy)methane	Ave	0.3771	0.3663	0.3000	9.71	10.0	-2.9	20.0
2,4-Dichlorophenol	Ave	0.2448	0.2483	0.2000	10.1	10.0	1.4	20.0
1,2,4-Trichlorobenzene	Ave	0.2720	0.2672		9.82	10.0	-1.8	20.0
Naphthalene	Ave	0.9489	0.9124	0.7000	9.62	10.0	-3.8	20.0
4-Chloroaniline	Ave	0.4061	0.3997	0.0100	9.84	10.0	-1.6	20.0
Hexachlorobutadiene	Ave	0.1435	0.1407	0.0100	9.80	10.0	-2.0	20.0
Caprolactam	Ave	0.0903	0.0917	0.0100	20.3	20.0	1.5	20.0
4-Chloro-3-methylphenol	Ave	0.2662	0.2579	0.2000	9.69	10.0	-3.1	20.0
2-Methylnaphthalene	Ave	0.6307	0.6111	0.4000	9.69	10.0	-3.1	20.0
1-Methylnaphthalene	Ave	0.5903	0.5721		9.69	10.0	-3.1	20.0
Hexachlorocyclopentadiene	Ave	0.2394	0.2751	0.0500	11.5	10.0	14.9	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4494	0.4472	0.0100	9.95	10.0	-0.5	20.0
2,4,6-Trichlorophenol	Ave	0.2858	0.2971	0.2000	10.4	10.0	4.0	20.0
2,4,5-Trichlorophenol	Ave	0.3108	0.3062	0.2000	9.85	10.0	-1.5	20.0
1,1'-Biphenyl	Ave	1.321	1.291	0.0100	9.77	10.0	-2.3	20.0
2-Chloronaphthalene	Ave	0.9807	0.9535	0.8000	9.72	10.0	-2.8	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Lab File ID: 0414028.D Lab Sample ID: MB 240-81444/22-A

Matrix: Water Date Extracted: 04/11/2013 07:57

Instrument ID: A4AG2 Date Analyzed: 04/15/2013 02:13

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-81444/23-A	0414029.D	04/15/2013 02:35
MRC-MW-18A-040513	240-22881-7	0415009.D	04/15/2013 11:39
MRC-MW-19A-040513	240-22881-6	0415010.D	04/15/2013 12:01
MRC-MW08B-040513	240-22881-3	0415011.D	04/15/2013 12:23
MRC-MW08A-040513	240-22881-2	0415012.D	04/15/2013 12:45
MRC-MW-20A-040513	240-22881-8	0415013.D	04/15/2013 13:07

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-81444/22-A

Matrix: Water | Lab File ID: 0414028.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 1000(mL) | Date Analyzed: 04/15/2013 02:13

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81858 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	65		20-110
367-12-4	2-Fluorophenol (Surr)	69		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	64		21-110
4165-62-2	Phenol-d5 (Surr)	69		21-110
1718-51-0	Terphenyl-d14 (Surr)	58		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0414029.D

Lab ID: LCS 240-81444/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	14.9	74	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW08A-040513	240-22881-2	58	60	54	57	67	50
MRC-MW08B-040513	240-22881-3	22	24	23	24	20 X	20 X
MRC-MW-19A-040513	240-22881-6	11	13 X	59	62	11 X	57
MRC-MW-18A-040513	240-22881-7	21	23	51	53	37	51
MRC-MW-20A-040513	240-22881-8	55	56	51	52	52	44
	MB 240-81444/22-A	69	69	64	65	65	58
	LCS 240-81444/23-A	78	79	76	74	81	62

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Sample No.: STD6 240-81858/13 Date Analyzed: 04/14/2013 20:47

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0414013.D Heated Purge: (Y/N) N

Calibration ID: 14488

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		341226	6.02	1349260	7.14	793286	8.64
UPPER LIMIT		682452	6.52	2698520	7.64	1586572	9.14
LOWER LIMIT		170613	5.52	674630	6.64	396643	8.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81858/19		366427	6.02	1464624	7.14	843661	8.64
MB 240-81444/22-A		247624	6.02	966114	7.14	558742	8.64
LCS 240-81444/23-A		230997	6.02	915891	7.14	532821	8.64
STD6 240-81876/2 CCVIS		271522	6.02	1044741	7.13	600018	8.63

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Sample No.: STD6 240-81858/13 Date Analyzed: 04/14/2013 20:47

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0414013.D Heated Purge: (Y/N) N

Calibration ID: 14488

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1360592	9.90	1445168	12.48	1241746	14.56
UPPER LIMIT		2721184	10.40	2890336	12.98	2483492	15.06
LOWER LIMIT		680296	9.40	722584	11.98	620873	14.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81858/19		1439401	9.90	1504652	12.48	1313586	14.56
MB 240-81444/22-A		959369	9.90	981750	12.48	834103	14.56
LCS 240-81444/23-A		904065	9.90	956249	12.48	827189	14.56
STD6 240-81876/2 CCVIS		1004912	9.89	1056588	12.47	914974	14.55

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Sample No.: STD6 240-81876/2 Date Analyzed: 04/15/2013 09:06

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0415002.D Heated Purge: (Y/N) N

Calibration ID: 14492

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		271522	6.02	1044741	7.13	600018	8.63
UPPER LIMIT		543044	6.52	2089482	7.63	1200036	9.13
LOWER LIMIT		135761	5.52	522371	6.63	300009	8.13
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22881-7	MRC-MW-18A-040513	238926	6.02	905319	7.13	523413	8.63
240-22881-6	MRC-MW-19A-040513	215966	6.02	849501	7.13	488195	8.63
240-22881-3	MRC-MW08B-040513	227841	6.02	894046	7.13	518679	8.63
240-22881-2	MRC-MW08A-040513	258284	6.02	984365	7.13	578557	8.63
240-22881-8	MRC-MW-20A-040513	236091	6.02	919531	7.13	542503	8.63

DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
NPT = Naphthalene-d8
Area Limit = 50%-200% of internal standard area
ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT
ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-22881-1

SDG No.:

Sample No.: STD6 240-81876/2 Date Analyzed: 04/15/2013 09:06

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0415002.D Heated Purge: (Y/N) N

Calibration ID: 14492

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1004912	9.89	1056588	12.47	914974	14.55
UPPER LIMIT		2009824	10.39	2113176	12.97	1829948	15.05
LOWER LIMIT		502456	9.39	528294	11.97	457487	14.05
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-22881-7	MRC-MW-18A-040513	901024	9.89	924342	12.47	825381	14.55
240-22881-6	MRC-MW-19A-040513	824045	9.89	836380	12.47	741171	14.55
240-22881-3	MRC-MW08B-040513	883166	9.89	878892	12.46	768355	14.55
240-22881-2	MRC-MW08A-040513	979609	9.89	1029010	12.47	909397	14.55
240-22881-8	MRC-MW-20A-040513	925982	9.89	949172	12.47	853852	14.55

PHN = Phenanthrene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-d12
CRY = Chrysene-d12
Area Limit = 50%-200% of internal standard area
PRY = Perylene-d12
RT Limit = ± 0.5 minutes of internal standard RT
PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

6850

Perchlorate by LC/MS or LC/MS/MS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Instrument ID: A5 Start Date: 04/17/2013 11:36

Analysis Batch Number: 14484 End Date: 04/18/2013 14:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/17/2013 11:36	1		Anion HR 4.6(mm)
ICB 320-14484/2		04/17/2013 11:53	1	17APR13-Perc-005.d	Anion HR 4.6(mm)
STD01 320-14484/3 IC		04/17/2013 12:09	1	17APR13-Perc-006.d	Anion HR 4.6(mm)
STD02 320-14484/4 IC		04/17/2013 12:26	1	17APR13-Perc-007.d	Anion HR 4.6(mm)
STD03 320-14484/5 IC		04/17/2013 12:42	1	17APR13-Perc-008.d	Anion HR 4.6(mm)
STD04 320-14484/6 ICISAV		04/17/2013 12:59	1	17APR13-Perc-009.d	Anion HR 4.6(mm)
STD05 320-14484/7 IC		04/17/2013 13:15	1	17APR13-Perc-010.d	Anion HR 4.6(mm)
STD06 320-14484/8 IC		04/17/2013 13:32	1	17APR13-Perc-011.d	Anion HR 4.6(mm)
STD07 320-14484/9 IC		04/17/2013 13:48	1	17APR13-Perc-012.d	Anion HR 4.6(mm)
STD08 320-14484/10 IC		04/17/2013 14:04	1	17APR13-Perc-013.d	Anion HR 4.6(mm)
CCB 320-14484/11		04/17/2013 14:21	1	17APR13-Perc-014.d	Anion HR 4.6(mm)
ICV 320-14484/12		04/17/2013 14:37	1	17APR13-Perc-015.d	Anion HR 4.6(mm)
CCB 320-14484/71		04/18/2013 06:49	1		Anion HR 4.6(mm)
CCVL 320-14484/72		04/18/2013 07:05	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 07:21	1		Anion HR 4.6(mm)
CCVL 320-14484/74		04/18/2013 07:38	1	17APR13-Perc-077.d	Anion HR 4.6(mm)
CCV 320-14484/75		04/18/2013 07:54	1	17APR13-Perc-078.d	Anion HR 4.6(mm)
CCB 320-14484/76		04/18/2013 08:11	1	17APR13-Perc-079.d	Anion HR 4.6(mm)
MB 320-14482/1-A		04/18/2013 08:27	1	17APR13-Perc-080.d	Anion HR 4.6(mm)
LCS 320-14482/2-A		04/18/2013 08:44	1	17APR13-Perc-081.d	Anion HR 4.6(mm)
INF 320-14482/3-A		04/18/2013 09:00	1	17APR13-Perc-082.d	Anion HR 4.6(mm)
240-22881-2	MRC-MW08A-040513	04/18/2013 09:17	1	17APR13-Perc-083.d	Anion HR 4.6(mm)
240-22881-3	MRC-MW08B-040513	04/18/2013 09:33	1	17APR13-Perc-084.d	Anion HR 4.6(mm)
240-22881-3 MS	MRC-MW08B-040513 MS	04/18/2013 09:50	1	17APR13-Perc-085.d	Anion HR 4.6(mm)
240-22881-3 MSD	MRC-MW08B-040513 MSD	04/18/2013 10:06	1	17APR13-Perc-086.d	Anion HR 4.6(mm)
240-22881-4	MRC-MW51A-040513	04/18/2013 10:23	1	17APR13-Perc-087.d	Anion HR 4.6(mm)
240-22881-5	MRC-MW52A-040513	04/18/2013 10:39	1	17APR13-Perc-088.d	Anion HR 4.6(mm)
240-22881-9	MRC-MW-109A-040513	04/18/2013 10:56	1	17APR13-Perc-089.d	Anion HR 4.6(mm)
CCV 320-14484/87		04/18/2013 11:12	1	17APR13-Perc-090.d	Anion HR 4.6(mm)
ZZZZZ		04/18/2013 11:29	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 11:45	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:01	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:18	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:34	1		Anion HR 4.6(mm)

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LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Instrument ID: A5 Start Date: 04/17/2013 11:36

Analysis Batch Number: 14484 End Date: 04/18/2013 14:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/18/2013 12:51	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 13:07	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 13:24	1		Anion HR 4.6(mm)
CCVL 320-14484/96		04/18/2013 13:40	1	17APR13-Perc-09 9.d	Anion HR 4.6(mm)
CCV 320-14484/97		04/18/2013 13:57	1		Anion HR 4.6(mm)
CCB 320-14484/98		04/18/2013 14:13	1	17APR13-Perc-10 1.d	Anion HR 4.6(mm)

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FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1 Analy Batch No.: 14484

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2013 12:09 Calibration End Date: 04/17/2013 14:04 Calibration ID: 2659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-14484/3	17APR13-Perc-006.d
Level 2	STD02 320-14484/4	17APR13-Perc-007.d
Level 3	STD03 320-14484/5	17APR13-Perc-008.d
Level 4	STD04 320-14484/6	17APR13-Perc-009.d
Level 5	STD05 320-14484/7	17APR13-Perc-010.d
Level 6	STD06 320-14484/8	17APR13-Perc-011.d
Level 7	STD07 320-14484/9	17APR13-Perc-012.d
Level 8	STD08 320-14484/10	17APR13-Perc-013.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7384 0.7621	0.8746 0.7868	0.8005 0.8262	0.7989	0.7580	Ave		0.7932				5.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1 Analy Batch No.: 14484

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2013 12:09 Calibration End Date: 04/17/2013 14:04 Calibration ID: 2659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-14484/3	17APR13-Perc-006.d
Level 2	STD02 320-14484/4	17APR13-Perc-007.d
Level 3	STD03 320-14484/5	17APR13-Perc-008.d
Level 4	STD04 320-14484/6	17APR13-Perc-009.d
Level 5	STD05 320-14484/7	17APR13-Perc-010.d
Level 6	STD06 320-14484/8	17APR13-Perc-011.d
Level 7	STD07 320-14484/9	17APR13-Perc-012.d
Level 8	STD08 320-14484/10	17APR13-Perc-013.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	1652791 55853603	3960329 108134397	6229108 213946874	12496042	24139678	0.150 5.00	0.300 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICV 320-14484/12 Calibration Date: 04/17/2013 14:37

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-015.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.8216		5.18	5.00	3.6	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCVL 320-14484/74 Calibration Date: 04/18/2013 07:38

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-077.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7435		0.469	0.500	-6.3	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCV 320-14484/75 Calibration Date: 04/18/2013 07:54

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-078.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7718		0.973	1.00	-2.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCV 320-14484/87 Calibration Date: 04/18/2013 11:12

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-090.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7664		1.93	2.00	-3.4	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Lab Sample ID: CCVL 320-14484/96 Calibration Date: 04/18/2013 13:40

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-099.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.8189		0.516	0.500	3.2	50.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-14484/2

Matrix: Water Lab File ID: 17APR13-Perc-005.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/17/2013 11:53

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-14484/11

Matrix: Water Lab File ID: 17APR13-Perc-014.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/17/2013 14:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-14484/76

Matrix: Water Lab File ID: 17APR13-Perc-079.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/18/2013 08:11

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-14484/98

Matrix: Water Lab File ID: 17APR13-Perc-101.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/18/2013 14:13

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Lab File ID: 17APR13-Perc-080.d Lab Sample ID: MB 320-14482/1-A

Matrix: Water Date Extracted: 04/16/2013 17:03

Instrument ID: A5 Date Analyzed: 04/18/2013 08:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-14482/2-A	17APR13-Perc-081.d	04/18/2013 08:44
MRC-MW08A-040513	240-22881-2	17APR13-Perc-083.d	04/18/2013 09:17
MRC-MW08B-040513	240-22881-3	17APR13-Perc-084.d	04/18/2013 09:33
MRC-MW08B-040513 MS	240-22881-3 MS	17APR13-Perc-085.d	04/18/2013 09:50
MRC-MW08B-040513 MSD	240-22881-3 MSD	17APR13-Perc-086.d	04/18/2013 10:06
MRC-MW51A-040513	240-22881-4	17APR13-Perc-087.d	04/18/2013 10:23
MRC-MW52A-040513	240-22881-5	17APR13-Perc-088.d	04/18/2013 10:39
MRC-MW-109A-040513	240-22881-9	17APR13-Perc-089.d	04/18/2013 10:56

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22881-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-14482/1-A

Matrix: Water | Lab File ID: 17APR13-Perc-080.d

Analysis Method: 6850 | Date Collected:

Extraction Method: Filtration | Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/18/2013 08:27

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 75(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-081.d

Lab ID: LCS 320-14482/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	4.95	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-085.d

Lab ID: 240-22881-3 MS Client ID: MRC-MW08B-040513 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	2.1	7.07	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-086.d

Lab ID: 240-22881-3 MSD Client ID: MRC-MW08B-040513 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	7.22	103	2	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/17/2013 14:04

Calibration ID: 2659

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		148228842	9.82				
UPPER LIMIT		222343263	10.82				
LOWER LIMIT		74114421	8.82				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-14484/11		160564406	9.83				
ICV 320-14484/12		142989114	9.82				
CCVL 320-14484/74		152935824	9.83				
CCV 320-14484/75		158187279	9.83				
CCB 320-14484/76		163443936	9.85				
MB 320-14482/1-A		156345569	9.85				
LCS 320-14482/2-A		146362285	9.85				
INF 320-14482/3-A		143777835	9.79				
240-22881-2	MRC-MW08A-040513	148834188	9.83				
240-22881-3	MRC-MW08B-040513	146029868	9.83				
240-22881-3 MS	MRC-MW08B-040513 MS	135715351	9.83				
240-22881-3 MSD	MRC-MW08B-040513 MSD	141474831	9.85				
240-22881-4	MRC-MW51A-040513	151445052	9.83				
240-22881-5	MRC-MW52A-040513	145851734	9.83				
240-22881-9	MRC-MW-109A-040513	144144857	9.85				
CCV 320-14484/87		145009018	9.86				
CCVL 320-14484/96		119544372	9.86				
CCB 320-14484/98		161734352	9.89				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-082.d

Lab ID: INF 320-14482/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.94	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22881-1

SDG No.:

Project: MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW08A-040513	240-22881-2
MRC-MW51A-040513	240-22881-4
MRC-MW52A-040513	240-22881-5
MRC-MW-19A-040513	240-22881-6
MRC-MW-18A-040513	240-22881-7
MRC-MW-20A-040513	240-22881-8
MRC-MW-109A-040513	240-22881-9

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/19/2013 13:18 End Date: 04/19/2013 16:44

Lab Sample Id	D/F	Type	Time	Analytes: Hg
IC 440-99239/6-A	1		13:18	X
IC 440-99239/7-A	1		13:21	X
IC 440-99239/8-A	1		13:23	X
IC 440-99239/9-A	1		13:25	X
IC 440-99239/10-A	1		13:28	X
IC 440-99239/11-A	1		13:30	X
ICV 440-99239/1-A	1		13:39	X
ICB 440-99239/2-A	1		13:42	X
CRA 440-99239/5-A	1		13:44	X
CCV 440-99239/3-A	1		14:11	X
CCB 440-99239/4-A	1		14:14	X
MB 440-99212/1-A	1	T	14:16	X
LCS 440-99212/2-A	1	T	14:19	X
ZZZZZZ			14:21	
240-22783-A-5-E MS	1	T	14:24	X
240-22783-A-5-F MSD	1	T	14:26	X
ZZZZZZ			14:29	
ZZZZZZ			14:31	
ZZZZZZ			14:34	
ZZZZZZ			14:36	
CCV 440-99239/3-A	1		14:39	X
CCB 440-99239/4-A	1		14:41	X
240-22881-2	1	T	14:44	X
240-22881-4	1	T	14:46	X
240-22881-5	1	T	14:48	X
240-22881-6	1	T	14:51	X
ZZZZZZ			14:53	
240-22881-8	1	T	14:56	X
240-22881-9	1	T	14:58	X
ZZZZZZ			15:01	
ZZZZZZ			15:03	
CCV 440-99239/3-A	1		15:06	X
CCB 440-99239/4-A	1		15:08	X
ZZZZZZ			15:11	
ZZZZZZ			15:13	
ZZZZZZ			15:16	
ZZZZZZ			15:18	
ZZZZZZ			15:21	
ZZZZZZ			15:23	
ZZZZZZ			15:25	
ZZZZZZ			15:28	
ZZZZZZ			15:30	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/19/2013 13:18 End Date: 04/19/2013 16:44

Lab Sample Id	D/F	Type	Time	Analytes: Hg
CCV 440-99239/3-A			15:33	
CCB 440-99239/4-A			15:35	
ZZZZZZ			15:38	
ZZZZZZ			15:40	
ZZZZZZ			15:43	
ZZZZZZ			15:45	
ZZZZZZ			15:47	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:55	
CCV 440-99239/3-A			15:57	
CCB 440-99239/4-A			16:00	
ZZZZZZ			16:02	
ZZZZZZ			16:05	
ZZZZZZ			16:07	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:15	
CCV 440-99239/3-A	1		16:17	X
CCB 440-99239/4-A	1		16:20	X
CRA 440-99239/5-A	1		16:27	X
ZZZZZZ			16:30	
ZZZZZZ			16:32	
ZZZZZZ			16:34	
240-22881-7	1	T	16:37	X
CCV 440-99239/3-A	1		16:39	X
CCB 440-99239/4-A	1		16:42	X
CRA 440-99239/5-A	1		16:44	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	ICV 440-99239/1-A 04/19/2013 13:39				CCV 440-99239/3-A 04/19/2013 14:11				CCV 440-99239/3-A 04/19/2013 14:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.98		8.00	100	4.20		4.00	105	4.26		4.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

ICV Source: ME 1PPM HG2_00075 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00077

Analyte	CCV 440-99239/3-A 04/19/2013 15:06				CCV 440-99239/3-A 04/19/2013 16:17				CCV 440-99239/3-A 04/19/2013 16:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.19		4.00	105	4.10		4.00	103	4.12		4.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99239/2-A 04/19/2013 13:42		CCB 440-99239/4-A 04/19/2013 14:14		CCB 440-99239/4-A 04/19/2013 14:41		CCB 440-99239/4-A 04/19/2013 15:08	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.151	J	0.110	J	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-99239/4-A 04/19/2013 16:20 Found	C	CCB 440-99239/4-A 04/19/2013 16:42 Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U				

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-99212/1-A	04/19/2013 10:55	99212		20	20
LCS 440-99212/2-A	04/19/2013 10:55	99212		20	20
240-22783-A-5-E MS	04/19/2013 10:55	99212		20	20
240-22783-A-5-F MSD	04/19/2013 10:55	99212		20	20
240-22881-2	04/19/2013 10:55	99212		20	20
240-22881-4	04/19/2013 10:55	99212		20	20
240-22881-5	04/19/2013 10:55	99212		20	20
240-22881-6	04/19/2013 10:55	99212		20	20
240-22881-7	04/19/2013 10:55	99212		20	20
240-22881-8	04/19/2013 10:55	99212		20	20
240-22881-9	04/19/2013 10:55	99212		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99212/1-A

Instrument Code: CV-HG2 Batch No.: 99457

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-99212/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00077

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	7.95		99	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22783-A-5-E MS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	7.74		0.20	U	8.00	97	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-22783-A-5-F MSD

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.95		8.00	99	70-130	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-99239/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.293		147	50-150

Lab Sample ID: CRA 440-99239/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.243		122	50-150

Lab Sample ID: CRA 440-99239/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00077

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.188	J	94	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22881-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22881-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/18/2013 08:56 End Date: 04/18/2013 15:44

Lab Sample Id	D/F	Type	Time	Analytes																
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn	
STD0 440-99213/1 IC	1		08:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
STD1 440-99213/2 IC	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
STD2 440-99213/3 IC	1		09:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
STD3 440-99213/4 IC	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
STD4 440-99213/5 IC	1		09:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICV 440-99213/6	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICB 440-99213/7	1		09:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRI 440-99213/8	1		09:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRI 440-99213/9	1		09:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSA 440-99213/10	1		09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB 440-99213/11	1		09:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV 440-99213/12	1		13:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB 440-99213/13	1		13:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MB 440-98850/1-A	1	R	13:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LCS 440-98850/2-A	1	R	13:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZZZZZZ			13:21																	
240-22783-A-5-B MS	1	R	13:24	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
240-22783-A-5-C MSD	1	R	13:26	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
240-22783-A-5-A PDS	1	R	13:28	X	X	X	X	X	X	X	X	X		X	X	X	X	X		
ZZZZZZ			13:30																	
240-22783-A-5-B MS ^100	100	R	13:33										X						X	
240-22783-A-5-C MSD ^100	100	R	13:35										X						X	
240-22783-A-5-A PDS ^100	100	R	13:37										X						X	
CCV 440-99213/24	1		13:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB 440-99213/25	1		13:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV 440-99213/26	1		14:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB 440-99213/27	1		14:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZZZZZZ			14:52																	
ZZZZZZ			14:54																	
ZZZZZZ			14:57																	
ZZZZZZ			14:59																	
ZZZZZZ			15:01																	
ZZZZZZ			15:03																	
ZZZZZZ			15:06																	
240-22881-2	1	R	15:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
240-22881-4	1	R	15:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
240-22881-5	1	R	15:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV 440-99213/38	1		15:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB 440-99213/39	1		15:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
240-22881-6	1	R	15:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
240-22881-7	1	R	15:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
240-22881-8	1	R	15:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/18/2013 08:56 End Date: 04/18/2013 15:44

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn										
240-22881-9	2	R	15:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ZZZZZZ			15:33																										
ZZZZZZ			15:35																										
ZZZZZZ			15:37																										
440-43871-F-1-A SD ^5	5	R	15:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCV 440-99213/48	1		15:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 440-99213/49	1		15:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-99213/6 04/18/2013 09:08				CCV 440-99213/12 04/18/2013 13:12				CCV 440-99213/24 04/18/2013 13:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.3		25.0	93	47.5		50.0	95	48.0		50.0	96
Arsenic	26.8		25.0	107	49.7		50.0	99	50.3		50.0	101
Barium	26.0		25.0	104	49.0		50.0	98	49.6		50.0	99
Beryllium	25.5		25.0	102	49.3		50.0	99	48.8		50.0	98
Cadmium	26.0		25.0	104	48.3		50.0	97	49.1		50.0	98
Chromium	27.2		25.0	109	51.0		50.0	102	50.8		50.0	102
Cobalt	26.5		25.0	106	51.4		50.0	103	51.0		50.0	102
Copper	26.5		25.0	106	50.4		50.0	101	49.9		50.0	100
Lead	25.6		25.0	102	47.4		50.0	95	48.0		50.0	96
Molybdenum	26.4		25.0	106	48.8		50.0	98	48.9		50.0	98
Nickel	27.1		25.0	108	51.3		50.0	103	50.6		50.0	101
Selenium	26.3		25.0	105	49.4		50.0	99	48.3		50.0	97
Silver	25.5		25.0	102	48.5		50.0	97	48.6		50.0	97
Thallium	26.5		25.0	106	49.4		50.0	99	49.6		50.0	99
Vanadium	26.9		25.0	108	51.3		50.0	103	51.3		50.0	103
Zinc	26.9		25.0	107	46.4		50.0	93	47.1		50.0	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	CCV 440-99213/26 04/18/2013 14:44				CCV 440-99213/38 04/18/2013 15:15				CCV 440-99213/48 04/18/2013 15:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	47.3		50.0	95	46.8		50.0	94	48.9		50.0	98
Arsenic	49.5		50.0	99	50.1		50.0	100	50.7		50.0	101
Barium	49.0		50.0	98	48.4		50.0	97	50.1		50.0	100
Beryllium	48.8		50.0	98	50.2		50.0	100	51.4		50.0	103
Cadmium	47.7		50.0	95	48.4		50.0	97	49.3		50.0	99
Chromium	50.1		50.0	100	50.1		50.0	100	51.7		50.0	103
Cobalt	50.5		50.0	101	51.4		50.0	103	51.9		50.0	104
Copper	49.6		50.0	99	49.5		50.0	99	51.0		50.0	102
Lead	47.2		50.0	94	46.3		50.0	93	49.0		50.0	98
Molybdenum	48.2		50.0	96	49.6		50.0	99	50.2		50.0	100
Nickel	49.7		50.0	99	50.9		50.0	102	50.7		50.0	101
Selenium	49.4		50.0	99	49.4		50.0	99	50.4		50.0	101
Silver	47.9		50.0	96	48.8		50.0	98	50.0		50.0	100
Thallium	49.4		50.0	99	48.5		50.0	97	50.8		50.0	102
Vanadium	51.1		50.0	102	51.5		50.0	103	52.5		50.0	105
Zinc	45.8		50.0	92	47.8		50.0	96	53.3		50.0	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99213/7 04/18/2013 09:10		CCB 440-99213/13 04/18/2013 13:15		CCB 440-99213/25 04/18/2013 13:42		CCB 440-99213/27 04/18/2013 14:47	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.408	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	0.477	J	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	0.285	J	0.346	J	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	1.01	J	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-99213/39 04/18/2013 15:17		CCB 440-99213/49 04/18/2013 15:44					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U				
Arsenic	1.0	1.0	U	1.0	U				
Barium	1.0	1.0	U	1.0	U				
Beryllium	0.50	0.50	U	0.50	U				
Cadmium	1.0	1.0	U	1.0	U				
Chromium	2.0	2.0	U	2.0	U				
Cobalt	1.0	0.742	J	0.151	J				
Copper	2.0	2.0	U	2.0	U				
Lead	1.0	1.0	U	1.0	U				
Molybdenum	2.0	2.0	U	2.0	U				
Nickel	2.0	1.21	J	2.0	U				
Selenium	2.0	2.0	U	2.0	U				
Silver	1.0	1.0	U	1.0	U				
Thallium	1.0	1.0	U	1.0	U				
Vanadium	2.0	2.0	U	2.0	U				
Zinc	20	20	U	20	U				

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-98850/1-A	04/17/2013 13:45	98850		50	50
LCS 440-98850/2-A	04/17/2013 13:45	98850		50	50
240-22783-A-5-B MS	04/17/2013 13:45	98850		50	50
240-22783-A-5-B MS ^100	04/17/2013 13:45	98850		50	50
240-22783-A-5-C MSD	04/17/2013 13:45	98850		50	50
240-22783-A-5-C MSD ^100	04/17/2013 13:45	98850		50	50
240-22881-2	04/17/2013 13:45	98850		50	50
240-22881-4	04/17/2013 13:45	98850		50	50
240-22881-5	04/17/2013 13:45	98850		50	50
240-22881-6	04/17/2013 13:45	98850		50	50
240-22881-7	04/17/2013 13:45	98850		50	50
240-22881-8	04/17/2013 13:45	98850		50	50
240-22881-9	04/17/2013 13:45	98850		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-98850/1-A

Instrument Code: ICPMS5 Batch No.: 99213

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	0.320	J		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	0.185	J		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-98850/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	79.8		100	80	120		6020
Arsenic	80.0	80.5		101	80	120		6020
Beryllium	80.0	80.4		101	80	120		6020
Cadmium	80.0	78.5		98	80	120		6020
Barium	80.0	79.3		99	80	120		6020
Chromium	80.0	80.4		101	80	120		6020
Copper	80.0	80.1		100	80	120		6020
Nickel	80.0	80.0		100	80	120		6020
Lead	80.0	78.3		98	80	120		6020
Selenium	80.0	80.1		100	80	120		6020
Cobalt	80.0	82.0		103	80	120		6020
Silver	80.0	79.8		100	80	120		6020
Thallium	80.0	79.3		99	80	120		6020
Zinc	80.0	73.3		92	80	120		6020
Molybdenum	80.0	78.9		99	80	120		6020
Vanadium	80.0	81.6		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICSA 440-99213/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.339**	
Arsenic		**0.0790**	
Barium		**0.223**	
Beryllium		**0.0300**	
Cadmium		**0.958**	
Chromium		**1.39**	
Cobalt		**0.109**	
Copper		**0.662**	
Lead		**0.138**	
Molybdenum	**2000**	**2074**	**104**
Nickel		**0.981**	
Selenium		**-0.206**	
Silver		**0.0850**	
Thallium		**0.0430**	
Vanadium		**0.256**	
Zinc		**9.13**	
Aluminum	*100000*	*91559*	*92*
Calcium	*100000*	*93640*	*94*
Cerium		*0.0570*	
Iron	*100000*	*95901*	*96*
Magnesium	*100000*	*95642*	*96*
Manganese		*0.175*	
Potassium	*100000*	*96602*	*97*
Sodium	*100000*	*96007*	*96*
Sr		*4.98*	
Tin		*0.0960*	
Uranium		*0.0300*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Lab Sample ID: ICSAB 440-99213/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.7**	**104**
Arsenic	**20.0**	**20.5**	**103**
Barium	**20.0**	**21.3**	**106**
Beryllium	**20.0**	**20.4**	**102**
Cadmium	**20.0**	**20.2**	**101**
Chromium	**20.0**	**20.9**	**105**
Cobalt	**20.0**	**19.5**	**98**
Copper	**20.0**	**19.4**	**97**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2120**	**105**
Nickel	**20.0**	**19.6**	**98**
Selenium	**20.0**	**19.1**	**96**
Silver	**20.0**	**19.5**	**97**
Thallium	**20.0**	**19.3**	**96**
Vanadium	**20.0**	**20.6**	**103**
Zinc	**20.0**	**26.5**	**132**
Aluminum	*100000*	*92816*	*93*
Calcium	*101000*	*96212*	*95*
Cerium	*20.0*	*21.2*	*106*
Iron	*100000*	*97668*	*97*
Magnesium	*101000*	*96777*	*96*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*98171*	*98*
Sodium	*101000*	*98075*	*98*
Sr	*20.0*	*26.7*	*134*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*20.6*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22783-A-5-B MS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.5		2.0	U	80.0	99	75-125		6020
Arsenic	80.5		5.0	U	80.0	101	75-125		6020
Beryllium	392		280		80.0	142	75-125	F	6020
Cadmium	84.5		9.4		80.0	94	75-125		6020
Barium	2630		2500		80.0	144	75-125	4	6020
Chromium	77.1		2.0	U	80.0	96	75-125		6020
Copper	206		120		80.0	102	75-125		6020
Nickel	5970		6200		80.0	-317	75-125	4	6020
Lead	69.7		0.83	J	80.0	86	75-125		6020
Selenium	76.7		3.1	J	80.0	92	75-125		6020
Cobalt	1470		1300		80.0	160	75-125	4	6020
Silver	78.0		0.90	J	80.0	96	75-125		6020
Thallium	71.1		0.42	J	80.0	88	75-125		6020
Zinc	7830		7800		80.0	-23	75-125	4	6020
Molybdenum	84.5		0.29	J	80.0	105	75-125		6020
Vanadium	79.6		20	U	80.0	100	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22783-A-5-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	78.2		80.0	98	75-125	2	20		6020
Arsenic	81.4		80.0	102	75-125	1	20		6020
Beryllium	390		80.0	139	75-125	1	20	F	6020
Cadmium	84.0		80.0	93	75-125	1	20		6020
Barium	2590		80.0	96	75-125	1	20	4	6020
Chromium	76.3		80.0	95	75-125	1	20		6020
Copper	200		80.0	94	75-125	3	20		6020
Nickel	5880		80.0	-429	75-125	2	20	4	6020
Lead	69.5		80.0	86	75-125	0	20		6020
Selenium	76.0		80.0	91	75-125	1	20		6020
Cobalt	1420		80.0	91	75-125	4	20	4	6020
Silver	76.8		80.0	95	75-125	2	20		6020
Thallium	70.3		80.0	87	75-125	1	20		6020
Zinc	7220		80.0	-780	75-125	8	20	4	6020
Molybdenum	83.2		80.0	104	75-125	2	20		6020
Vanadium	79.8		80.0	100	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-22783-A-5-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	77.0		2.0	U	80.0	96	75-125		6020
Arsenic	76.7		5.0	U	80.0	96	75-125		6020
Beryllium	356		280		80.0	96	75-125		6020
Cadmium	82.7		9.4		80.0	92	75-125		6020
Barium	2580		2500		80.0	NC	75-125		6020
Chromium	75.4		2.0	U	80.0	94	75-125		6020
Copper	204		120		80.0	99	75-125		6020
Nickel	5790		6200		80.0	NC	75-125		6020
Lead	67.3		0.83	J	80.0	83	75-125		6020
Selenium	71.9		3.1	J	80.0	86	75-125		6020
Cobalt	1440		1300		80.0	NC	75-125		6020
Silver	75.6		0.90	J	80.0	93	75-125		6020
Thallium	69.1		0.42	J	80.0	86	75-125		6020
Zinc	7170		7800		80.0	NC	75-125		6020
Molybdenum	81.9		0.29	J	80.0	102	75-125		6020
Vanadium	78.0		20	U	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 440-43871-F-1-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22881-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	12		13.6	J	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	21		21.7	J	3.6		6020
Chromium	1.8	J	10	U	NC		6020
Copper	1.1	J	10	U	NC		6020
Nickel	2.0		4.10	J	NC		6020
Lead	0.26	J	5.0	U	NC		6020
Selenium	3.1	J	4.67	J	NC		6020
Cobalt	0.67	J	1.84	J	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	54		65.4	J	NC		6020
Molybdenum	41		39.5	J	2.9		6020
Vanadium	18	J	18.9	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/18/2013 End Date: 04/18/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-99213/1 IC	08:56	100		100		100		100		100	
STD1 440-99213/2 IC	08:59	101		100		101		101		100	
STD2 440-99213/3 IC	09:01	94		93		92		92		92	
STD3 440-99213/4 IC	09:04	93		91		91		91		91	
STD4 440-99213/5 IC	09:06	92		91		90		89		89	
ICV 440-99213/6	09:08	99		97		97		98		98	
ICB 440-99213/7	09:10	91		89		88		89		89	
CRI 440-99213/8	09:13	99		98		99		99		100	
CRI 440-99213/9	09:15	91		90		89		89		89	
ICSA 440-99213/10	09:18	84		90		85		83		83	
ICSAB 440-99213/11	09:20	84		90		86		84		83	
CCV 440-99213/12	13:12	91		95		94		94		95	
CCB 440-99213/13	13:15	90		95		94		93		93	
MB 440-98850/1-A	13:17	90		94		94		94		95	
LCS 440-98850/2-A	13:19	90		95		93		93		93	
240-22783-A-5-B MS	13:24	70		98		91		91		86	
240-22783-A-5-C MSD	13:26	71		101		91		92		87	
240-22783-A-5-A PDS	13:28	77		100		93		92		87	
240-22783-A-5-B MS	13:33	92		95		92		92		93	
240-22783-A-5-C MSD	13:35	92		94		92		92		94	
240-22783-A-5-A PDS	13:37	91		93		92		91		92	
CCV 440-99213/24	13:40	91		93		90		91		92	
CCB 440-99213/25	13:42	90		92		90		90		92	
CCV 440-99213/26	14:44	89		92		90		91		93	
CCB 440-99213/27	14:47	88		92		90		90		92	
240-22881-2	15:08	80		96		88		87		85	
240-22881-4	15:10	81		103		94		94		90	
240-22881-5	15:13	87		101		91		90		87	
CCV 440-99213/38	15:15	102		105		100		101		99	
CCB 440-99213/39	15:17	94		97		94		94		94	
240-22881-6	15:23	86		93		90		90		90	
240-22881-7	15:26	80		94		89		89		90	
240-22881-8	15:28	87		92		90		90		92	
240-22881-9	15:30	85		92		90		89		90	
440-43871-F-1-A SD	15:39	88		98		94		93		92	
CCV 440-99213/48	15:42	89		95		93		92		94	
CCB 440-99213/49	15:44	89		94		92		92		93	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/18/2013 End Date: 04/18/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-99213/1 IC	08:56	100									
STD1 440-99213/2 IC	08:59	102									
STD2 440-99213/3 IC	09:01	94									
STD3 440-99213/4 IC	09:04	92									
STD4 440-99213/5 IC	09:06	92									
ICV 440-99213/6	09:08	99									
ICB 440-99213/7	09:10	90									
CRI 440-99213/8	09:13	102									
CRI 440-99213/9	09:15	92									
ICSA 440-99213/10	09:18	88									
ICSAB 440-99213/11	09:20	88									
CCV 440-99213/12	13:12	95									
CCB 440-99213/13	13:15	94									
MB 440-98850/1-A	13:17	95									
LCS 440-98850/2-A	13:19	94									
240-22783-A-5-B MS	13:24	96									
240-22783-A-5-C MSD	13:26	95									
240-22783-A-5-A PDS	13:28	95									
240-22783-A-5-B MS	13:33	93									
240-22783-A-5-C MSD	13:35	93									
240-22783-A-5-A PDS	13:37	93									
CCV 440-99213/24	13:40	92									
CCB 440-99213/25	13:42	93									
CCV 440-99213/26	14:44	93									
CCB 440-99213/27	14:47	93									
240-22881-2	15:08	87									
240-22881-4	15:10	92									
240-22881-5	15:13	89									
CCV 440-99213/38	15:15	96									
CCB 440-99213/39	15:17	92									
240-22881-6	15:23	92									
240-22881-7	15:26	92									
240-22881-8	15:28	93									
240-22881-9	15:30	93									
440-43871-F-1-A SD	15:39	93									
CCV 440-99213/48	15:42	93									
CCB 440-99213/49	15:44	94									

FORM XV - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99213/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.10	J	110	50-150
Arsenic	1.00	1.07		107	50-150
Beryllium	0.500	0.498	J	100	50-150
Cadmium	0.500	0.508	J	102	50-150
Barium	1.00	1.03		103	50-150
Chromium	1.00	1.07	J	107	50-150
Copper	1.00	0.863	J	86	50-150
Nickel	1.00	1.07	J	107	50-150
Lead	1.00	1.02		102	50-150
Selenium	1.00	1.13	J	113	50-150
Cobalt	0.500	0.549	J	110	50-150
Silver	1.00	1.03		103	50-150
Thallium	1.00	1.06		106	50-150
Zinc	5.00	10.5	J	210	50-150
Molybdenum	1.00	1.02	J	102	50-150
Vanadium	2.00	2.28		114	50-150

Lab Sample ID: CRI 440-99213/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.08		104	50-150
Arsenic	2.00	2.17		109	50-150
Beryllium	1.00	1.00		100	50-150
Cadmium	1.00	1.05		105	50-150
Barium	2.00	2.10		105	50-150
Chromium	2.00	2.09		104	50-150
Copper	2.00	2.13		106	50-150
Nickel	2.00	2.26		113	50-150
Lead	2.00	2.04		102	50-150
Selenium	2.00	2.24		112	50-150
Cobalt	1.00	1.06		106	50-150
Silver	2.00	2.07		104	50-150
Thallium	2.00	2.08		104	50-150
Zinc	10.0	14.9	J	149	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22881-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99213/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.05		103	50-150
Vanadium	4.00	4.39		110	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22881-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22881-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22881-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

VOC CALCULATION

	SAMPLE		
	MRC-MW-109A-040513		
TARGET ANALYTE	**cis-1,2-dichloroethene**		
ANALYTE RESPONSE	1028651		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1215131		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.3769		
DILUTION FACTOR (DF)	5		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF	=	112.30	µg/L
(I.S. RESPONSE) X (CAL. R.F.)			

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-109A-040513 | Lab Sample ID: 240-22881-9

Matrix: Water | Lab File ID: UXC0761.D

Analysis Method: 8260B | Date Collected: 04/05/2013 15:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/13/2013 01:09

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 81772 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	25	U	25	5.5
71-43-2	Benzene	5.0	U	5.0	0.65
108-86-1	Bromobenzene	5.0	U	5.0	0.65
74-97-5	Bromochloromethane	5.0	U	5.0	1.5
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75
75-25-2	Bromoform	5.0	U	5.0	3.2
74-83-9	Bromomethane	5.0	U	5.0	2.1
78-93-3	2-Butanone	25	U	25	2.9
75-15-0	Carbon disulfide	5.0	U	5.0	0.65
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.65
108-90-7	Chlorobenzene	5.0	U	5.0	0.75
75-00-3	Chloroethane	5.0	U	5.0	1.5
110-75-8	2-Chloroethyl vinyl ether	50	U	50	5.0
67-66-3	Chloroform	5.0	U	5.0	0.80
74-87-3	Chloromethane	5.0	U	5.0	1.5
95-49-8	2-Chlorotoluene	5.0	U	5.0	0.55
106-43-4	4-Chlorotoluene	5.0	U	5.0	0.90
156-59-2	cis-1,2-Dichloroethene	110		5.0	0.85
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.70
124-48-1	Dibromochloromethane	5.0	U	5.0	0.90
96-12-8	1,2-Dibromo-3-Chloropropane	25	U	25	3.4
106-93-4	1,2-Dibromoethane	5.0	U	5.0	1.2
74-95-3	Dibromomethane	5.0	U	5.0	1.4
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.65
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.70
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.65
75-71-8	Dichlorodifluoromethane	5.0	U	5.0	1.6
75-34-3	1,1-Dichloroethane	5.0	U	5.0	0.75
107-06-2	1,2-Dichloroethane	5.0	U	5.0	1.1
75-35-4	1,1-Dichloroethene	5.1		5.0	0.95
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.90
142-28-9	1,3-Dichloropropane	5.0	U	5.0	0.80
594-20-7	2,2-Dichloropropane	5.0	U	5.0	0.65
563-58-6	1,1-Dichloropropene	5.0	U	5.0	0.65
108-20-3	Diisopropyl ether	25	U	25	7.5
100-41-4	Ethylbenzene	5.0	U	5.0	0.85

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX15\20130412-18827.b\UXC0761.D		
Lims ID:	240-22881-A-9	Client ID:	MRC-MW-109A-040513
Inject. Date:	13-Apr-2013 01:09:30	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0018827-010		
Misc. Info.:	C30412B,8260LLUX15,,43582		
Operator:	43582	Instrument ID:	A3UX15
Purge Vol:	5.000 mL	ALS Bottle#:	40
Lims Batch ID:	81772	Lims Sample ID:	10
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX15\20130412-18827.b\8260_15.m		
Last Update:	15-Apr-2013 08:31:10	Calib Date:	04-Apr-2013 16:10:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX15\20130404-18552.b\UXC0384.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK008		

First Level Reviewer: evansle Date: 15-Apr-2013 08:21:42

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	4.656	4.656	0.0	99	1215131	10.0	
* 2 Chlorobenzene-d5	117	7.301	7.301	0.0	85	861464	10.0	
* 3 1,4-Dichlorobenzene-d4	152	9.506	9.507	-0.001	95	394897	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.111	4.111	0.0	62	293421	8.29	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.383	4.384	-0.001	0	350249	9.22	
$ 7 Toluene-d8 (Surr)	98	6.008	6.008	0.0	94	1135246	7.90	
$ 131 4-Bromofluorobenzene (Surr)	95	8.403	8.392	0.011	95	333706	7.47	
140 C6-C10	1		0.000					
139 C6-C12	1		0.000					
134 Chlorodifluoromethane TIC	1		0.000					
142 1,3-Diethylbenzene TIC	1		0.000					
143 1,3-Butadiene TIC	1		0.000					
141 Isobutylene TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.158					
13 Chloromethane	50		1.265					9
14 Vinyl chloride	62	1.348	1.348	0.0	99	768923	11.0	
15 Bromomethane	94		1.585					
16 Chloroethane	64		1.656					
17 Dichlorofluoromethane	67		1.798					
18 Trichlorofluoromethane	101		1.858					
19 Ethyl ether	59		2.071					
20 Acrolein	56		2.178					
21 1,1-Dichloroethene	96	2.261	2.261	0.0	82	43037	1.03	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.273					
22 Acetone	43	2.308	2.308	0.0	80	14981	0.6640	
24 Iodomethane	142		2.379					9
26 Carbon disulfide	76		2.427					9
27 Acetonitrile	41		2.545					
29 3-Chloro-1-propene	76		2.557					
28 Methyl acetate	43		2.581					9

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
30 Methylene Chloride	84		2.664					
31 2-Methyl-2-propanol	59		2.771					9
25 Methylal	45		2.856					9
32 Acrylonitrile	53		2.866					
33 trans-1,2-Dichloroethene	96	2.889	2.889	0.0	85	21290	0.4911	
34 Methyl tert-butyl ether	73		2.889					9
35 Hexane	86		3.115					
36 1,1-Dichloroethane	63		3.233					
37 Vinyl acetate	86		3.281					9
38 Isopropyl ether	87		3.293					
39 2-Chloro-1,3-butadiene	53		3.305					
40 Tert-butyl ethyl ether	59		3.589					
42 cis-1,2-Dichloroethene	96	3.707	3.708	-0.001	68	1028651	22.5	
43 2,2-Dichloropropane	77		3.708					9
41 2-Butanone (MEK)	43		3.731					9
44 Propionitrile	54		3.779					
45 Ethyl acetate	43		3.779					9
46 Methacrylonitrile	41		3.897					9
47 Chlorobromomethane	128		3.909					
48 Tetrahydrofuran	42		3.945					9
49 Chloroform	83		3.968					
50 1,1,1-Trichloroethane	97		4.123					9
51 Cyclohexane	56		4.158					
53 Carbon tetrachloride	117		4.253					
52 1,1-Dichloropropene	75		4.253					9
54 Isobutyl alcohol	41		4.372					
55 Benzene	78		4.431					9
56 1,2-Dichloroethane	62		4.443					
57 Tert-amyl methyl ether	73		4.526					9
58 n-Heptane	100		4.656					
59 n-Butanol	56		4.929					
60 Trichloroethene	130		4.965					
61 Ethyl acrylate	55		5.071					
63 Methylcyclohexane	83		5.131					
62 1,2-Dichloropropane	63		5.154					9
65 Dibromomethane	93		5.261					9
64 Methyl methacrylate	41		5.261					
66 1,4-Dioxane	88		5.285					9
67 Dichlorobromomethane	83		5.392					
68 2-Nitropropane	41		5.593					9
69 2-Chloroethyl vinyl ether	63		5.664					
70 cis-1,3-Dichloropropene	75		5.783					
71 4-Methyl-2-pentanone (MIBK)	43		5.925					9
72 Toluene	91		6.067					9
73 trans-1,3-Dichloropropene	75		6.269					9
74 Ethyl methacrylate	69		6.352					
75 1,1,2-Trichloroethane	97		6.423					9
77 Tetrachloroethene	164		6.554					9
76 1,3-Dichloropropane	76		6.577					
78 2-Hexanone	43		6.660					
80 Tetrahydrothiophene	60		6.767					
79 Chlorodibromomethane	129		6.779					

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
Tetrahydrofuran	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	0.0478							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

SVOC CALCULATION LIQUIDS	**SAMPLE MRC-MW-19A-040513**		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	82225		
INTERNAL STANDARD	1,4-dichlorobenzene-D4		
I.S. RESPONSE	215966		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.4552		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1020	ml	
DILUTION FACTOR (DF)	1		
INJECTION VOLUME - VOL inj.	0.001	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final / (I.S. RESPONSE) X (CAL. RRF) X (vol. initial)	=	6.5600	ng/ml or ug/l

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW-19A-040513 | Lab Sample ID: 240-22881-6

Matrix: Water | Lab File ID: 0415010.D

Analysis Method: 8270D | Date Collected: 04/05/2013 10:53

Extract. Method: 3520C | Date Extracted: 04/11/2013 07:57

Sample wt/vol: 1020(mL) | Date Analyzed: 04/15/2013 12:01

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 81876 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	6.6		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	11		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	11	X	21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	13	X	21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

Report Date: 16-Apr-2013 07:48:32 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4AG2\20130415-18859.b\0415010.D		
Lims ID:	240-22881-E-6-A	Client ID:	MRC-MW-19A-040513
Inject. Date:	15-Apr-2013 12:01:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018859-010		
Misc. Info.:	240-22881-E-6-A =240-22881-E-6-A		
Operator:		Instrument ID:	A4AG2
Injection Vol:	1.0 ul	ALS Bottle#:	10
Lims Batch ID:	81876	Lims Sample ID:	10
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20130415-18859.b\8270 ag2.m		
Last Update:	16-Apr-2013 07:48:23	Calib Date:	15-Apr-2013 01:51:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20130414-18852.b\0414027.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK015		

First Level Reviewer: hulat Date: 15-Apr-2013 13:53:05

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	6.016	6.016	0.0	95	215966	4.00	
* 2 Naphthalene-d8	136	7.129	7.134	-0.005	99	849501	4.00	
* 3 Acenaphthene-d10	164	8.632	8.632	0.0	91	488195	4.00	
* 4 Phenanthrene-d10	188	9.894	9.894	0.0	97	824045	4.00	
* 5 Chrysene-d12	240	12.467	12.467	0.0	96	836380	4.00	
* 6 Perylene-d12	264	14.553	14.547	0.006	96	741171	4.00	
$ 7 2-Fluorophenol	112	4.775	4.775	0.0	86	107169	1.64	
$ 8 Phenol-d5	99	5.658	5.658	0.0	98	170313	2.01	
$ 9 Nitrobenzene-d5	82	6.492	6.492	0.0	86	466499	5.94	
$ 10 2-Fluorobiphenyl (Surr)	172	8.038	8.038	0.0	99	948885	6.24	
$ 11 2,4,6-Tribromophenol	330	9.295	9.295	0.0	88	31560	1.69	
$ 12 Terphenyl-d14	244	11.253	11.253	0.0	99	955465	5.74	
26 1,4-Dioxane	88	2.593	2.604	-0.011	92	82225	3.35	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-22881-1 Analy Batch No.: 81858

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/14/2013 19:42 Calibration End Date: 04/14/2013 22:36 Calibration ID: 14488

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81858/18	0414018.D
Level 2	STD2 240-81858/17	0414017.D
Level 3	STD3 240-81858/16	0414016.D
Level 4	STD4 240-81858/15	0414015.D
Level 5	STD5 240-81858/14	0414014.D
Level 6	STD6 240-81858/13	0414013.D
Level 7	STD7 240-81858/12	0414012.D
Level 8	STD8 240-81858/11	0414011.D
Level 9	STD9 240-81858/10	0414010.D

ANALYTE	RRF LVL 1 / LVL 6	RRF LVL 2 / LVL 7	RRF LVL 3 / LVL 8	RRF LVL 4 / LVL 9	RRF LVL 5	CURVE TYPE	COEFFICIENT B	COEFFICIENT M1	COEFFICIENT M2	#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
1,4-Dioxane	0.4434	0.4721 0.4543	0.4274 0.4854	0.4091 0.4823	0.4673	Ave		0.4552				5.9		20.0			
N-Nitrosodimethylamine	0.6514	0.6353 0.6662	0.6388 0.7114	0.6767 0.6938	0.6841	Ave		0.6697				4.0		20.0			
Pyridine	1.1064	1.1646 1.1501	1.1030 1.2099	1.0989 1.1901	1.1281	Ave		1.1439				3.7		20.0			
Benzaldehyde	1.0672 0.9547	0.9989 0.9588	1.0195 0.9990	0.9818 0.9365	0.9833	Ave		0.9889			0.0100	3.9		20.0			
Phenol	1.4926	1.4491 1.5003	1.5168 1.6188	1.4908 1.5407	1.5121	Ave		1.5152			0.8000	3.3		20.0			
Aniline	1.8868	1.7530 1.9288	1.9028 2.0539	1.8746 1.9879	1.8864	Ave		1.9093				4.6		20.0			
Bis(2-chloroethyl)ether	1.1958	1.1992 1.2196	1.2463 1.2997	1.1983 1.2534	1.2191	Ave		1.2289			0.7000	2.9		20.0			
2-Chlorophenol	1.2346	1.1604 1.2567	1.2266 1.3519	1.2067 1.3009	1.2361	Ave		1.2467			0.8000	4.7		20.0			
1,3-Dichlorobenzene	1.3298	1.3123 1.3317	1.3348 1.4319	1.3291 1.3852	1.3217	Ave		1.3471				3.0		20.0			
1,4-Dichlorobenzene	1.3398	1.3102 1.3474	1.3734 1.4478	1.3489 1.4068	1.3758	Ave		1.3687				3.1		20.0			
Benzyl alcohol	0.8177	0.7572 0.8130	0.7817 0.8802	0.7923 0.8594	0.8192	Ave		0.8151				4.9		20.0			
1,2-Dichlorobenzene	1.2919	1.3509 1.3030	1.3296 1.3773	1.2889 1.3470	1.3181	Ave		1.3258				2.4		20.0			
2-Methylphenol	1.1360	1.1174 1.1326	1.1350 1.2301	1.1299 1.1967	1.1453	Ave		1.1529			0.7000	3.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

PERCHLORATE CALCULATION LIQUIDS	SAMPLE MRC-MW-08B-040513		
TARGET ANALYTE	PERCHLORATE		
ANALYTE RESPONSE	23728437		
INTERNAL STANDARD	18-O PERCHLORATE		
I.S. RESPONSE	145029868		
I.S. CONCENTRATION	10	NG/ML	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.7932		
VOLUME OF FINAL EXTRACT	4	ML	
VOLUME OF INITIAL EXTRACT	4	ML	
DILUTION FACTOR (DF)	1		

$$\frac{\text{(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final}}{\text{(I.S. RESPONSE) X (CAL. RRF) X (vol. initial)}} = 2.0627 \text{ ng/ml or ug/l}$$

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 240-22881-1

SDG No.:

Client Sample ID: MRC-MW08B-040513 | Lab Sample ID: 240-22881-3

Matrix: Water | Lab File ID: 17APR13-Perc-084.d

Analysis Method: 6850 | Date Collected: 04/05/2013 11:20

Extraction Method: Filtration | Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) | Date Analyzed: 04/18/2013 09:33

Con. Extract Vol.: 4.00(mL) | Dilution Factor: 1

Injection Volume: 75(uL) | GC Column: Anion HR ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	2.1		0.50	0.082

Report Date: 18-Apr-2013 15:38:58 Chrom Revision: 2.1 07-Apr-2013 20:36:54

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20130416-3939.b\17APR13-Perc-084.d		
Lims ID:	240-22881-D-3-A	Client ID:	MRC-MW08B-040513
Inject. Date:	18-Apr-2013 09:33:41	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:			
Misc. Info.:			
Operator:		Instrument ID:	A5
Injection Vol:	75.0 ul	ALS Bottle#:	0
Lims Batch ID:	14484	Lims Sample ID:	81
Detector:	MS QQQ		
Method:	\\Sacchrom\ChromData\A5\20130416-3939.b\6850_A5.m		
Last Update:	18-Apr-2013 15:38:55	Calib Date:	17-Apr-2013 14:04:58
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20130416-3939.b\17APR13-Perc-013.d		
Limit Group:	LC 6850 ICAL		
Integrator:	Picker		
Column Type:		Column Dia:	
Process Host:	XAWRK031		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	9.833	9.819	0.014		146029868	10.0		1902	
109.0 > 91.0	9.829	9.819	0.010		45807306		3.19(2.30-3.80)	3711	
2 Perchlorate									
99.0 > 83.0	9.840	9.826	0.014	1.001	23728437	2.05		248	
101.0 > 85.0	9.850	9.826	0.024	1.002	8436313		2.81(2.30-3.80)	222	

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-22881-1 Analy Batch No.: 14484

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2013 12:09 Calibration End Date: 04/17/2013 14:04 Calibration ID: 2659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-14484/3	17APR13-Perc-006.d
Level 2	STD02 320-14484/4	17APR13-Perc-007.d
Level 3	STD03 320-14484/5	17APR13-Perc-008.d
Level 4	STD04 320-14484/6	17APR13-Perc-009.d
Level 5	STD05 320-14484/7	17APR13-Perc-010.d
Level 6	STD06 320-14484/8	17APR13-Perc-011.d
Level 7	STD07 320-14484/9	17APR13-Perc-012.d
Level 8	STD08 320-14484/10	17APR13-Perc-013.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7384 0.7621	0.8746 0.7868	0.8005 0.8262	0.7989	0.7580	Ave		0.7932				5.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **May 15, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- TAL METALS**
LOCKHEED-MIDDLE RIVER COMPLEX (MRC)
SDG 240-22976-1

SAMPLES: 3/Aqueous/
MRC-MW-11A-040913 MRC-MW-15A-040913
MRC-MW-16A-040913

Overview

The sample set for Lockheed MRC, SDG 240-22976-1, consists of three (3) aqueous environmental samples. This SDG contained no field duplicate pairs.

All samples were analyzed for target analyte list (TAL) metals. The samples were collected by Tetra Tech April 9th, 2013 and analyzed by TestAmerica. Metals analyses were conducted using method 6020. Mercury analyses were conducted using method 7470.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, laboratory control sample recoveries, laboratory duplicate results, ICP interference standards, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Barium [1]	0.33 ug/L	1.65 ug/L
Antimony [2]	0.43 ug/L	2.1 ug/L
Copper [2]	0.63 ug/L	3.1 ug/L
Molybdenum [2]	0.41 ug/L	2.0 ug/L
Silver [2]	0.15 ug/L	0.75 ug/L
Antimony [3]	0.49 ug/L	2.45 ug/L
Molybdenum [3]	0.22 ug/L	1.1 ug/L

[1] Maximum concentration found in preparation blanks affecting samples in batch 99721.
[2] Maximum concentration found in a calibration blank affecting samples analyzed on 4/23/13.
[3] Maximum concentration found in a calibration blank affecting samples analyzed on 4/25/13.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The CRDL standard analyzed on 4/23/13 had a percent recovery >110% for antimony, arsenic, nickel, and zinc. Samples MRC-MW-11A-040913 and MRC-MW-15A-040913 were affected. Positive arsenic and zinc results < 2X CRDL were qualified as estimated (J) due to conflicting directional bias. Antimony results were previously qualified for blank contamination. Nickel results were not qualified as sample results were > 2XCRDL.

- The CRDL standard analyzed on 4/25/13 had percent recoveries >110% for antimony, chromium, copper, nickel, and silver and percent recoveries <90% for selenium and zinc. Sample MRC-MW-16A-040913 was affected. Positive chromium, and silver results < 2X CRDL were qualified as estimated (J) due to conflicting directional bias. Non-detected selenium results were qualified as biased low (UL). Antimony results were previously qualified for blank contamination. Copper nickel and zinc results were not qualified as sample results were > 2XCRDL.

Notes

Non-detected results were reported at the MDL.

The CRDL standard analyzed on 4/29/13 had a percent recovery >120% for mercury. All samples were affected. No validation action was warranted as sample results were non-detected.

Executive Summary

Laboratory Performance: Preparation and calibration blank non-compliances resulted in the qualification of sample results. CRDL standard non-compliances for arsenic, chromium, silver, and zinc resulted in the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993. The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW-11A-040913			MRC-MW-15A-040913			MRC-MW-16A-040913		
SDG: 240-22976-1	LAB_ID	240-22976-5			240-22976-2			240-22976-3		
FRACTION: M	SAMP_DATE	4/9/2013			4/9/2013			4/9/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		1.2	B	A	0.4	B	A	0.53	B	A
ARSENIC		0.94	J	CP	0.9	U		0.9	U	
BARIUM		41			170			230		
BERYLLIUM		0.1	U		0.1	U		7.6		
CADMIUM		0.36	J	P	0.14	J	P	1.7		
CHROMIUM		0.9	U		0.9	U		1.4	J	CP
COBALT		50			35			260		
COPPER		1.1	B	A	0.58	B	A	7.2		
LEAD		0.5	J	P	0.23	J	P	0.92	J	P
MERCURY		0.1	U		0.1	U		0.1	U	
MOLYBDENUM		1	B	A	0.4	B	A	0.34	B	A
NICKEL		13			6.1			290		
SELENIUM		0.5	U		0.5	U		0.5	UL	C
SILVER		0.13	B	A	0.12	B	A	0.12	J	CP
THALLIUM		0.2	J	P	0.2	U		0.2	U	
VANADIUM		1.6	J	P	0.8	U		3.1	J	P
ZINC		250			6.9	J	CP	500		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-11A-040913 Lab Sample ID: 240-22976-5

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG ID.:

Matrix: Water Date Sampled: 04/09/2013 15:17

Reporting Basis: WET Date Received: 04/10/2013 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-15A-040913 Lab Sample ID: 240-22976-2

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG ID.:

Matrix: Water Date Sampled: 04/09/2013 11:36

Reporting Basis: WET Date Received: 04/10/2013 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-16A-040913 Lab Sample ID: 240-22976-3

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG ID.:

Matrix: Water Date Sampled: 04/09/2013 12:41

Reporting Basis: WET Date Received: 04/10/2013 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-11A-040913 Lab Sample ID: 240-22976-5

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG ID.:

Matrix: Water Date Sampled: 04/09/2013 15:17

Reporting Basis: WET Date Received: 04/10/2013 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	1.2	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	0.94	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	0.36	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	41	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.1	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	13	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.50	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	50	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.13	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.20	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	250	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.0	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	1.6	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-15A-040913 Lab Sample ID: 240-22976-2

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG ID.:

Matrix: Water Date Sampled: 04/09/2013 11:36

Reporting Basis: WET Date Received: 04/10/2013 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.40	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	0.14	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	170	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.58	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	6.1	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.23	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	35	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.12	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	6.9	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	0.40	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-16A-040913 Lab Sample ID: 240-22976-3

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG ID.:

Matrix: Water Date Sampled: 04/09/2013 12:41

Reporting Basis: WET Date Received: 04/10/2013 09:25

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.53	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	7.6	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.7	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	230	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.4	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	7.2	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	290	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.92	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	260	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.12	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	500	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.34	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	3.1	20	0.80	ug/L	J		1	6020

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Aparicio	Site Contact: Walt Payton	Lab Contact: Pat Oreana
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396
City/State/Zip: Germantown MD	Email:	Analysis Turnaround Time (CALENDAR DAYS)	Analyses
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	
Project Name: MNC - Ground water Sampling	Method of Shipment/Carrier: Fed EX		
Project Number: 112IC04795-02	Shipping/Tracking No:		
PO#			

COC No: 1 of 1 COCs

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs	TBT/ metals	1,4 Dioxane	Perchlorate	Sample Specific Notes / Special Instructions:
TB-040913	4-9-13	—		X						2					N	G	X				
MNC-MW-15A-040913		1136		X														X	X		
MNC-MW-16A-040913		1241		X					1	3			2				X	X	X		
MNC-MW-54A-040913		1404		X									3						X	X	
MNC-MW-11A-040913		1517		X					1	3			2				X	X	X		

240-22976 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained): ☐ Return to Client ☐ Disposal By Lab ☐

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Payton	TT INC	4-9-13 / 1630		TestAmerica	4/9/13 / 1630
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	4/9/13 / 1710		TA	4-10-13 925
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC Groundwater Sampling

Report Number: 240-22976-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Total Recoverable Metals and the 7470A Total Mercury analyses were performed at the TestAmerica Irvine laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT
The samples were received on 04/10/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.4 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples TB-040913 (240-22976-1), MRC-MW-16A-040913 (240-22976-3) and MRC-MW-11A-040913 (240-22976-5) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/15/2013.

Methylene Chloride was detected in method blank MB 240-81960/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Benzene was detected in method blank MB 240-81960/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW-16A-040913 (240-22976-3)[3.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 81960 exceeded control limits for the following analyte: trichlorofluoromethane. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. The results have been reported and qualified.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MRC-MW-15A-040913 (240-22976-2), MRC-MW-16A-040913 (240-22976-3), MRC-MW-54A-040913 (240-22976-4) and MRC-MW-11A-040913 (240-22976-5) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/15/2013 and analyzed on 04/20/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

PERCHLORATE

Sample MRC-MW-54A-040913 (240-22976-4) was analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/16/2013 and analyzed on 04/18/2013.

No difficulties were encountered during the perchlorate analysis. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW-15A-040913 (240-22976-2), MRC-MW-16A-040913 (240-22976-3) and MRC-MW-11A-040913 (240-22976-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/22/2013 and 04/24/2013 and analyzed on 04/23/2013, 04/24/2013 and 04/25/2013.

Barium was detected in method blank MB 440-99721/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW-15A-040913 (240-22976-2), MRC-MW-16A-040913 (240-22976-3) and MRC-MW-11A-040913 (240-22976-5) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/29/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TestAmerica Canton Sample Receipt Form/Narrative Login # : 22976

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 4-10-13 Opened on 4-10-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF 0°C)	Observed Sample Temp. 1.4 °C	Corrected Sample Temp. 1.4 °C
IR GUN# 4G	(CF +1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C
IR GUN# 5G	(CF +1 °C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C
IR GUN# 8	(CF +1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C

☐ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
	pH Strip Lot# HC256691		
15A	<2	4-10-13	JS
16A	<2	"	"
11A	<2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22976-1

Login Number: 22976
List Number: 1
Creator: King, Ronald

List Source: TestAmerica Irvine
List Creation: 04/11/13 02:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-22976-1

Login Number: 22976
List Number: 1
Creator: Huggins, Relda

List Source: TestAmerica Sacramento
List Creation: 04/11/13 03:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Sample Report

MRC-MW-11A -040913

Sample Table

Sample Name	240-22976-d-5-a
Data File Name	053SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1304
Acq Date Time	2013-04-23T11:22:28-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-99721 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

246.35 ug/L reported as 250 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	0.276	0.276	94.92	1247	86.21	3000	
Na	23	1	No Gas	79520.387	79520.387	1.65	2734966220	0.94	100000	
Mg	24	1	No Gas	15048.220	15048.220	0.99	352457293	1.58	112500	
Al	27	1	No Gas	56.367	56.367	56.81	1702370	58.25	4000	
K	39	1	No Gas	2188.761	2188.761	0.99	87078539	2.63	87500	
Ca	44	1	No Gas	24358.021	24358.021	0.23	29365084	1.91	225000	
V	51	1	No Gas	1.618	1.618	9.80	81038	11.56	4000	
Cr	52	1	No Gas	0.205	0.205	61.85	32645	18.45	4000	
Mn	55	1	No Gas	5699.308	5699.308	2.16	317514281	0.67	4000	>LDR
Fe	56	1	No Gas	43017.168	43017.168	2.01	1952130696	0.81	40000	>LDR
Co	59	1	No Gas	49.651	49.651	1.16	2242988	1.86	4000	
Ni	60	1	No Gas	13.441	13.441	1.23	145058	2.69	4000	
Cu	65	1	No Gas	1.091	1.091	17.23	13921	16.67	4000	
Zn	66	1	No Gas	246.356	246.356	1.20	1817425	1.11	2500	
As	75	1	No Gas	0.935	0.935	24.32	5182	27.65	4000	
Se	82	1	No Gas	-0.035	-0.035	-891.54	117	115.03	4000	
Sr	88	1	No Gas	86.227	86.227	1.22	5252313	1.41	4000	
Mo	95	1	No Gas	1.017	1.017	76.45	12934	71.68	4000	
[Mo]	98	1	No Gas	0.971	0.971	78.36	20146	73.32	4000	
Ag	107	1	No Gas	0.134	0.134	90.07	4736	71.40	100	
Cd	111	1	No Gas	0.364	0.364	55.61	2146	55.40	4000	
[Cd]	114	1	No Gas	0.295	0.295	36.20	3548	39.09	4000	
Sn	118	1	No Gas	0.114	0.114	129.21	6089	40.81	4000	
Sb	123	1	No Gas	1.150	1.150	14.09	22872	12.95	4000	
Ba	137	1	No Gas	40.724	40.724	1.02	360688	2.12	4000	
Ce	140	1	No Gas	0.488	0.488	25.93	39690	26.44	4000	
Tl	205	1	No Gas	0.197	0.197	67.58	8931	66.05	4000	
Pb	208	1	No Gas	0.502	0.502	28.55	31294	29.10	4000	
U	238	1	No Gas	0.274	0.274	48.62	18607	49.06	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	899865	2.18	1352296	66.54	60	120	
Sc-45 (IS)	45	1	No Gas	4262847	1.70	3982762	107.03	60	120	
Ge (IS)	72	1	No Gas	872562	1.35	815552	106.99	60	120	
Ge (IS)	74	1	No Gas	1198986	1.46	1131439	105.97	60	120	
In-115 (IS)	115	1	No Gas	5367541	1.46	5033493	106.64	60	120	
Tb-159 (IS)	159	1	No Gas	7082020	1.19	6591141	107.45	60	120	

HOLDTIME

SDG 240-22976-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/29/2013	4/29/2013	19	0	19
HG	UG/L	MRC-MW-05A-041013	240-23078-4	NM	4/10/2013	4/29/2013	4/29/2013	19	0	19
HG	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/29/2013	4/29/2013	20	0	20
HG	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/29/2013	4/29/2013	20	0	20
HG	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/29/2013	4/29/2013	20	0	20
HG	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/29/2013	4/29/2013	19	0	19
M	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/22/2013	4/23/2013	13	1	14
M	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/22/2013	4/23/2013	12	1	13
M	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/22/2013	4/24/2013	12	2	14
M	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/22/2013	4/23/2013	12	1	13
M	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/22/2013	4/24/2013	12	2	14
M	UG/L	MRC-MW-05A-041013	240-23078-4	NM	4/10/2013	4/22/2013	4/23/2013	12	1	13
M	UG/L	MRC-MW-05A-041013	240-23078-4	NM	4/10/2013	4/22/2013	4/24/2013	12	2	14
M	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/22/2013	4/24/2013	13	2	15
M	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/22/2013	4/24/2013	13	2	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/24/2013	4/25/2013	15	1	16
M	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/22/2013	4/23/2013	13	1	14
PCL	UG/L	MRC-MW-54A-040913	240-22976-4	NM	4/9/2013	4/16/2013	4/18/2013	7	2	9
PCL	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/16/2013	4/18/2013	6	2	8
OS	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OS	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OS	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OS	UG/L	MRC-MW-54A-040913	240-22976-4	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OV	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/17/2013	4/17/2013	7	0	7
OV	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/15/2013	4/15/2013	6	0	6
OV	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/15/2013	4/15/2013	6	0	6
OV	UG/L	TB-040913	240-22976-1	NM	4/9/2013	4/15/2013	4/15/2013	6	0	6
OV	UG/L	TB-041013	240-23078-1	NM	4/10/2013	4/17/2013	4/17/2013	7	0	7

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22976-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Beryllium	9	1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22976-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Beryllium	9	0.5	0.1

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22976-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-22976-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22976-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-22976-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22976-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Beryllium		4000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22976-1

SDG No.:

Instrument ID: ICPMS5 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-22976-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-99721/1-A	04/22/2013 13:39	99721		50	50
LCS 440-99721/2-A	04/22/2013 13:39	99721		50	50
240-23078-A-4-A MS	04/22/2013 13:39	99721		50	50
240-23078-A-4-B MSD	04/22/2013 13:39	99721		50	50
240-22976-2	04/22/2013 13:39	99721		50	50
240-22976-5	04/22/2013 13:39	99721		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99721/1-A

Instrument Code: ICPMS5 Batch No.: 99928

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	0.334	J		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99721/1-A

Instrument Code: ICPMS4 Batch No.: 100261

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	1.0	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23078-A-4-A MS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.5		2.0	U	80.0	103	75-125		6020
Arsenic	79.7		1.0	J	80.0	98	75-125		6020
Beryllium	94.7		13		80.0	103	75-125		6020
Cadmium	77.9		0.69	J	80.0	97	75-125		6020
Barium	377		290		80.0	104	75-125		6020
Chromium	78.5		2.0	U	80.0	98	75-125		6020
Copper	86.9		12		80.0	94	75-125		6020
Nickel	400		330		80.0	88	75-125	4	6020
Lead	74.7		1.1		80.0	92	75-125		6020
Selenium	77.3		5.0	U	80.0	97	75-125		6020
Cobalt	293		220		80.0	91	75-125		6020
Silver	76.6		0.10	J	80.0	96	75-125		6020
Thallium	77.0		0.23	J	80.0	96	75-125		6020
Zinc	565		500		80.0	80	75-125	4	6020
Molybdenum	79.5		0.38	J	80.0	99	75-125		6020
Vanadium	79.9		1.1	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23078-A-4-B MSD

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	83.6		80.0	104	75-125	1	20		6020
Arsenic	80.9		80.0	100	75-125	1	20		6020
Beryllium	94.5		80.0	102	75-125	0	20		6020
Cadmium	78.5		80.0	97	75-125	1	20		6020
Barium	379		80.0	105	75-125	0	20		6020
Chromium	79.7		80.0	100	75-125	1	20		6020
Copper	86.1		80.0	93	75-125	1	20		6020
Nickel	396		80.0	83	75-125	1	20	4	6020
Lead	75.4		80.0	93	75-125	1	20		6020
Selenium	78.2		80.0	98	75-125	1	20		6020
Cobalt	292		80.0	90	75-125	0	20		6020
Silver	78.1		80.0	97	75-125	2	20		6020
Thallium	77.7		80.0	97	75-125	1	20		6020
Zinc	564		80.0	78	75-125	0	20	4	6020
Molybdenum	81.5		80.0	101	75-125	3	20		6020
Vanadium	80.3		80.0	99	75-125	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23078-B-4-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.8		2.0	U	80.0	103	75-125		6020
Arsenic	80.8		1.0	J	80.0	100	75-125		6020
Beryllium	94.7		13		80.0	103	75-125		6020
Cadmium	76.8		0.69	J	80.0	95	75-125		6020
Barium	373		290		80.0	98	75-125		6020
Chromium	78.7		2.0	U	80.0	98	75-125		6020
Copper	85.9		12		80.0	93	75-125		6020
Nickel	392		330		80.0	79	75-125		6020
Lead	74.8		1.1		80.0	92	75-125		6020
Selenium	77.2		5.0	U	80.0	97	75-125		6020
Cobalt	290		220		80.0	88	75-125		6020
Silver	75.1		0.10	J	80.0	94	75-125		6020
Thallium	76.4		0.23	J	80.0	95	75-125		6020
Zinc	559		500		80.0	72	75-125	W	6020
Molybdenum	81.3		0.38	J	80.0	101	75-125		6020
Vanadium	80.5		1.1	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-99721/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	84.6		106	80	120		6020
Arsenic	80.0	80.2		100	80	120		6020
Cadmium	80.0	81.2		101	80	120		6020
Barium	80.0	81.1		101	80	120		6020
Chromium	80.0	82.9		104	80	120		6020
Copper	80.0	84.3		105	80	120		6020
Nickel	80.0	82.2		103	80	120		6020
Lead	80.0	80.7		101	80	120		6020
Selenium	80.0	84.0		105	80	120		6020
Cobalt	80.0	84.5		106	80	120		6020
Silver	80.0	80.0		100	80	120		6020
Thallium	80.0	83.2		104	80	120		6020
Zinc	80.0	73.9		92	80	120		6020
Molybdenum	80.0	78.5		98	80	120		6020
Vanadium	80.0	81.1		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-99721/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	80.0	83.6		104	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23078-B-3-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22976-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.40	J	10	U	NC		6020
Arsenic	1.1	J	25	U	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	38		39.0		1.5		6020
Chromium	2.0	U	10	U	NC		6020
Copper	8.2		8.54	J	NC		6020
Nickel	4.2		10	U	NC		6020
Lead	0.52	J	5.0	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	0.72	J	0.750	J	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	5.3	J	100	U	NC		6020
Molybdenum	0.48	J	50	U	NC		6020
Vanadium	3.1	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100229/1-A	04/24/2013 12:40	100229		50	50
LCS 440-100229/2-A	04/24/2013 12:40	100229		50	50
240-22976-3	04/24/2013 12:40	100229		50	50
240-22976-3 MS	04/24/2013 12:40	100229		50	50
240-22976-3 MSD	04/24/2013 12:40	100229		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100229/1-A

Instrument Code: ICPMS5 Batch No.: 100537

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-16A-040913 MS Lab ID: 240-22976-3 MS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.2		0.53	J	80.0	102	75-125		6020
Arsenic	80.4		5.0	U	80.0	101	75-125		6020
Beryllium	102		7.6		80.0	118	75-125		6020
Cadmium	80.2		1.7		80.0	98	75-125		6020
Barium	321		230		80.0	109	75-125		6020
Chromium	81.5		1.4	J	80.0	100	75-125		6020
Copper	81.7		7.2		80.0	93	75-125		6020
Nickel	360		290		80.0	93	75-125		6020
Lead	76.1		0.92	J	80.0	94	75-125		6020
Selenium	77.8		5.0	U	80.0	97	75-125		6020
Cobalt	336		260		80.0	95	75-125		6020
Silver	86.3		0.12	J	80.0	108	75-125		6020
Thallium	77.0		2.0	U	80.0	96	75-125		6020
Zinc	586		500		80.0	108	75-125	4	6020
Molybdenum	82.6		0.34	J	80.0	103	75-125		6020
Vanadium	83.0		3.1	J	80.0	100	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-16A-040913 MSD | Lab ID: 240-22976-3 MSD

Lab Name: TestAmerica Irvine | Job No.: 240-22976-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	80.9		80.0	100	75-125	2	20		6020
Arsenic	80.6		80.0	101	75-125	0	20		6020
Beryllium	101		80.0	117	75-125	1	20		6020
Cadmium	79.3		80.0	97	75-125	1	20		6020
Barium	315		80.0	101	75-125	2	20		6020
Chromium	81.3		80.0	100	75-125	0	20		6020
Copper	83.2		80.0	95	75-125	2	20		6020
Nickel	370		80.0	105	75-125	3	20		6020
Lead	75.6		80.0	93	75-125	1	20		6020
Selenium	77.0		80.0	96	75-125	1	20		6020
Cobalt	347		80.0	108	75-125	3	20		6020
Silver	85.6		80.0	107	75-125	1	20		6020
Thallium	76.8		80.0	96	75-125	0	20		6020
Zinc	584		80.0	105	75-125	0	20	4	6020
Molybdenum	81.6		80.0	102	75-125	1	20		6020
Vanadium	83.2		80.0	100	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-16A-040913 PDS Lab ID: 240-22976-3 PDS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	83.2		0.53	J	80.0	103	75-125		6020
Arsenic	82.6		5.0	U	80.0	103	75-125		6020
Beryllium	100		7.6		80.0	116	75-125		6020
Cadmium	80.6		1.7		80.0	99	75-125		6020
Barium	312		230		80.0	97	75-125		6020
Chromium	82.9		1.4	J	80.0	102	75-125		6020
Copper	84.6		7.2		80.0	97	75-125		6020
Nickel	366		290		80.0	101	75-125		6020
Lead	77.0		0.92	J	80.0	95	75-125		6020
Selenium	78.6		5.0	U	80.0	98	75-125		6020
Cobalt	343		260		80.0	103	75-125		6020
Silver	84.5		0.12	J	80.0	105	75-125		6020
Thallium	78.8		2.0	U	80.0	98	75-125		6020
Zinc	578		500		80.0	97	75-125		6020
Molybdenum	84.1		0.34	J	80.0	105	75-125		6020
Vanadium	86.0		3.1	J	80.0	104	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-100229/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	81.8		102	80	120		6020
Arsenic	80.0	80.5		101	80	120		6020
Beryllium	80.0	89.4		112	80	120		6020
Cadmium	80.0	80.5		101	80	120		6020
Barium	80.0	81.5		102	80	120		6020
Chromium	80.0	84.7		106	80	120		6020
Copper	80.0	87.7		110	80	120		6020
Nickel	80.0	85.8		107	80	120		6020
Lead	80.0	81.5		102	80	120		6020
Selenium	80.0	81.4		102	80	120		6020
Cobalt	80.0	86.8		108	80	120		6020
Silver	80.0	87.7		110	80	120		6020
Thallium	80.0	80.7		101	80	120		6020
Zinc	80.0	74.9		94	80	120		6020
Molybdenum	80.0	79.5		99	80	120		6020
Vanadium	80.0	83.5		104	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-22976-3

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-22976-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.53	J	10	U	NC		6020
Arsenic	5.0	U	25	U	NC		6020
Beryllium	7.6		7.35		3.4		6020
Cadmium	1.7		1.96	J	NC		6020
Barium	230		231		1.4		6020
Chromium	1.4	J	4.86	J	NC		6020
Copper	7.2		27.0		NC		6020
Nickel	290		307		7.7		6020
Lead	0.92	J	1.20	J	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	260		280		7.6		6020
Silver	0.12	J	0.680	J	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	500		500		0.13		6020
Molybdenum	0.34	J	1.28	J	NC		6020
Vanadium	3.1	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100728/1-A	04/29/2013 10:05	100728		20	20
LCS 440-100728/2-A	04/29/2013 10:05	100728		20	20
240-23078-A-4-C DU	04/29/2013 10:05	100728		20	20
240-23078-A-4-D MS	04/29/2013 10:05	100728		20	20
240-22976-2	04/29/2013 10:05	100728		20	20
240-22976-3	04/29/2013 10:05	100728		20	20
240-22976-5	04/29/2013 10:05	100728		20	20
240-23078-B-4-C MSD	04/29/2013 10:05	100728		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100728/1-A

Instrument Code: CV-HG2 Batch No.: 101127

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23078-A-4-D MS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	6.99		0.20	U	8.00	87	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23078-B-4-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.03		8.00	88	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: Lab ID: 240-23078-A-4-C DU

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-100728/2-A

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.01		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/29/2013 12:59 End Date: 04/29/2013 14:22

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-101025/6-A	1		12:59	X
IC 440-101025/7-A	1		13:02	X
IC 440-101025/8-A	1		13:04	X
IC 440-101025/9-A	1		13:06	X
IC 440-101025/10-A	1		13:09	X
IC 440-101025/11-A	1		13:11	X
ICV 440-101025/1-A	1		13:14	X
ICB 440-101025/2-A	1		13:16	X
CRA 440-101025/5-A	1		13:19	X
MB 440-100728/1-A	1	T	13:21	X
LCS 440-100728/2-A	1	T	13:24	X
ZZZZZZ			13:26	
240-23078-A-4-C DU	1	T	13:29	X
240-23078-A-4-D MS	1	T	13:31	X
240-23078-B-4-C MSD	1	T	13:34	X
ZZZZZZ			13:36	
ZZZZZZ			13:39	
240-22976-2	1	T	13:41	X
CCV 440-101025/3-A	1		13:43	X
CCB 440-101025/4-A	1		13:46	X
240-22976-3	1	T	13:48	X
240-22976-5	1	T	13:51	X
ZZZZZZ			13:56	
ZZZZZZ			14:02	
ZZZZZZ			14:04	
ZZZZZZ			14:07	
ZZZZZZ			14:09	
ZZZZZZ			14:12	
ZZZZZZ			14:14	
ZZZZZZ			14:17	
CCV 440-101025/3-A	1		14:19	X
CCB 440-101025/4-A	1		14:22	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	ICV 440-101025/1-A 04/29/2013 13:14				CCV 440-101025/3-A 04/29/2013 13:43				CCV 440-101025/3-A 04/29/2013 14:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.90		8.00	99	4.08		4.00	102	4.09		4.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-101025/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.242		121	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101025/2-A 04/29/2013 13:16		CCB 440-101025/4-A 04/29/2013 13:46		CCB 440-101025/4-A 04/29/2013 14:22			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/24/2013 09:06 End Date: 04/24/2013 13:14

Lab Sample Id	D/F	Type	Time	Analytes: Be
STD0 440-100261/1 IC	1		09:06	X
STD1 440-100261/2 IC	1		09:09	X
STD2 440-100261/3 IC	1		09:12	X
STD3 440-100261/4 IC	1		09:15	X
STD4 440-100261/5 IC	1		09:17	X
ICV 440-100261/6	1		09:20	X
ICB 440-100261/7	1		09:23	X
CRI 440-100261/8			09:25	
ZZZZZZ			09:28	
ICSA 440-100261/10	1		09:31	X
ICSAB 440-100261/11	1		09:34	X
RINSE 440-100261/12			09:40	
CRI 440-100261/13	1		09:43	X
CCV 440-100261/14			11:45	
CCB 440-100261/15			11:48	
ZZZZZZ			11:51	
ZZZZZZ			11:53	
ZZZZZZ			11:56	
ZZZZZZ			11:59	
ZZZZZZ			12:02	
ZZZZZZ			12:04	
ZZZZZZ			12:07	
ZZZZZZ			12:10	
ZZZZZZ			12:13	
CCV 440-100261/25	1		12:15	X
CCB 440-100261/26	1		12:18	X
ZZZZZZ			12:21	
ZZZZZZ			12:24	
ZZZZZZ			12:26	
ZZZZZZ			12:29	
ZZZZZZ			12:32	
MB 440-99721/1-A	1	R	12:35	X
LCS 440-99721/2-A	1	R	12:38	X
CCV 440-100261/34	1		12:40	X
CCB 440-100261/35	1		12:43	X
ZZZZZZ			12:46	
240-23078-A-4-A MS	1	R	12:49	X
240-23078-A-4-B MSD	1	R	12:51	X
240-23078-B-4-A PDS	1	R	12:54	X
240-22976-2	1	R	12:56	X
240-22976-5	1	R	12:59	X
ZZZZZZ			13:02	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/24/2013 09:06 End Date: 04/24/2013 13:14

Lab Sample Id	D/F	Type	Time	Analytes
				Be
ZZZZZZ			13:05	
240-23078-B-3-A SD ^5	5	R	13:08	X
CCV 440-100261/45	1		13:11	X
CCB 440-100261/46	1		13:14	X

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-100261/6 04/24/2013 09:20				CCV 440-100261/25 04/24/2013 12:15				CCV 440-100261/34 04/24/2013 12:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	26.1		25.0	104	52.0		50.0	104	47.2		50.0	94
Antimony	22.8		25.0	91	47.4		50.0	95	46.0		50.0	92
Arsenic	25.9		25.0	104	49.4		50.0	99	48.3		50.0	97
Barium	25.5		25.0	102	49.5		50.0	99	47.7		50.0	95
Cadmium	25.2		25.0	101	48.8		50.0	98	46.9		50.0	94
Chromium	25.0		25.0	100	51.0		50.0	102	49.2		50.0	98
Cobalt	24.2		25.0	97	51.3		50.0	103	48.9		50.0	98
Copper	25.7		25.0	103	48.6		50.0	97	46.8		50.0	94
Lead	24.4		25.0	98	49.6		50.0	99	48.6		50.0	97
Molybdenum	26.1		25.0	105	48.0		50.0	96	46.2		50.0	92
Nickel	26.1		25.0	105	49.4		50.0	99	47.5		50.0	95
Selenium	25.8		25.0	103	51.1		50.0	102	49.8		50.0	100
Silver	25.1		25.0	101	49.4		50.0	99	46.5		50.0	93
Thallium	23.9		25.0	96	51.3		50.0	103	50.0		50.0	100
Vanadium	24.6		25.0	98	51.3		50.0	103	49.6		50.0	99
Zinc	25.7		25.0	103	46.2		50.0	92	45.4		50.0	91

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	CCV 440-100261/45 04/24/2013 13:11											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	49.9		50.0	100								
Antimony	47.3		50.0	95								
Arsenic	49.9		50.0	100								
Barium	49.6		50.0	99								
Cadmium	48.8		50.0	98								
Chromium	52.0		50.0	104								
Cobalt	50.7		50.0	101								
Copper	48.9		50.0	98								
Lead	50.2		50.0	100								
Molybdenum	47.9		50.0	96								
Nickel	49.5		50.0	99								
Selenium	51.0		50.0	102								
Silver	50.6		50.0	101								
Thallium	51.3		50.0	103								
Vanadium	52.4		50.0	105								
Zinc	46.6		50.0	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-100261/13 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.91	J	95	50-150
Arsenic	2.00	2.06		103	50-150
Beryllium	1.00	1.05		105	50-150
Cadmium	1.00	0.998	J	100	50-150
Barium	2.00	2.03		102	50-150
Chromium	2.00	2.17		109	50-150
Copper	2.00	1.55	J	78	50-150
Nickel	2.00	2.30		115	50-150
Lead	2.00	1.93		96	50-150
Selenium	2.00	2.24		112	50-150
Cobalt	1.00	0.974	J	97	50-150
Silver	2.00	1.86		93	50-150
Thallium	2.00	1.89		94	50-150
Zinc	10.0	10.3	J	103	50-150
Molybdenum	2.00	2.81		140	50-150
Vanadium	4.00	3.78		95	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-100261/7 04/24/2013 09:23		CCB 440-100261/26 04/24/2013 12:18		CCB 440-100261/35 04/24/2013 12:43		CCB 440-100261/46 04/24/2013 13:14	
		Found	C	Found	C	Found	C	Found	C
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Antimony	2.0	0.784	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.278	J	0.321	J	0.281	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.304	J	0.298	J	0.335	J	0.296	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Lab Sample ID: ICSA 440-100261/10 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**0.0030**	
Aluminum	*100000*	*87774*	*88*
Antimony		*0.364*	
Arsenic		*0.222*	
Barium		*0.231*	
Cadmium		*0.0510*	
Calcium	*100000*	*92959*	*93*
Cerium		*0.0380*	
Chromium		*1.39*	
Cobalt		*0.0700*	
Copper		*0.329*	
Iron	*100000*	*92747*	*93*
Lead		*0.115*	
Magnesium	*100000*	*92831*	*93*
Manganese		*0.269*	
Molybdenum	*2000*	*2148*	*107*
Nickel		*0.910*	
Potassium	*100000*	*94483*	*94*
Selenium		*0.0340*	
Silver		*0.192*	
Sodium	*100000*	*93406*	*93*
Sr		*4.68*	
Thallium		*0.0210*	
Tin		*0.219*	
Uranium		*0.0230*	
Vanadium		*0.0790*	
Zinc		*4.78*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Lab Sample ID: ICSAB 440-100261/11 Instrument ID: ICPMS4

Lab File ID: 012ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**20.0**	**26.6**	**133**
Aluminum	*100000*	*90176*	*90*
Antimony	*20.0*	*25.4*	*127*
Arsenic	*20.0*	*25.2*	*126*
Barium	*20.0*	*26.2*	*131*
Cadmium	*20.0*	*24.5*	*122*
Calcium	*101000*	*96860*	*96*
Cerium	*20.0*	*26.7*	*133*
Chromium	*20.0*	*24.5*	*122*
Cobalt	*20.0*	*22.8*	*114*
Copper	*20.0*	*23.1*	*116*
Iron	*100000*	*96110*	*96*
Lead	*20.0*	*22.8*	*114*
Magnesium	*101000*	*95569*	*95*
Manganese	*20.0*	*23.6*	*118*
Molybdenum	*2020*	*2195*	*109*
Nickel	*20.0*	*24.0*	*120*
Potassium	*101000*	*98355*	*98*
Selenium	*20.0*	*24.9*	*124*
Silver	*20.0*	*24.3*	*122*
Sodium	*101000*	*96508*	*96*
Sr	*20.0*	*31.2*	*156*
Thallium	*20.0*	*22.2*	*111*
Tin	*20.0*	*25.7*	*128*
Uranium	*20.0*	*25.7*	*129*
Vanadium	*20.0*	*23.3*	*116*
Zinc	*20.0*	*27.6*	*138*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/24/2013 End Date: 04/24/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-100261/1	09:06	100		100		100		100		100	
STD1 440-100261/2	09:09	100		99		100		99		99	
STD2 440-100261/3	09:12	94		100		100		99		99	
STD3 440-100261/4	09:15	97		102		101		101		100	
STD4 440-100261/5	09:17	99		99		99		99		99	
ICV 440-100261/6	09:20	93		99		98		99		99	
ICB 440-100261/7	09:23	93		98		97		97		98	
ICSA 440-100261/10	09:31	81		95		90		88		93	
ICSAB 440-100261/11	09:34	79		92		90		87		93	
CRI 440-100261/13	09:43	88		94		95		97		99	
CCV 440-100261/25	12:15	89		95		95		97		100	
CCB 440-100261/26	12:18	90		95		95		97		98	
MB 440-99721/1-A	12:35	91		94		93		98		101	
LCS 440-99721/2-A	12:38	90		94		93		97		101	
CCV 440-100261/34	12:40	98		97		95		101		103	
CCB 440-100261/35	12:43	91		94		93		97		99	
240-23078-A-4-A MS	12:49	89		93		89		90		95	
240-23078-A-4-B MSD	12:51	89		98		93		94		100	
240-23078-B-4-A PDS	12:54	88		97		91		92		97	
240-22976-2	12:56	82		94		89		89		93	
240-22976-5	12:59	85		95		93		93		98	
240-23078-B-3-A SD	13:08	98		95		93		97		99	
CCV 440-100261/45	13:11	95		95		94		98		98	
CCB 440-100261/46	13:14	94		96		94		96		98	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/23/2013 08:59 End Date: 04/23/2013 11:39

| Lab Sample Id | D/F | Type | Time | Analytes | | |

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICV Source: MEICPMS4 ICV_00211 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00211

Analyte	ICV 440-99928/6 04/23/2013 09:10				CCV 440-99928/14 04/23/2013 11:02				CCV 440-99928/25 04/23/2013 11:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.6		25.0	94	51.6		50.0	103	51.1		50.0	102
Arsenic	25.6		25.0	102	49.9		50.0	100	50.5		50.0	101
Barium	26.0		25.0	104	50.8		50.0	102	50.6		50.0	101
Cadmium	25.4		25.0	102	50.5		50.0	101	50.5		50.0	101
Chromium	25.6		25.0	103	51.2		50.0	102	50.4		50.0	101
Cobalt	25.3		25.0	101	50.9		50.0	102	49.5		50.0	99
Copper	25.8		25.0	103	50.4		50.0	101	49.0		50.0	98
Lead	25.7		25.0	103	51.8		50.0	104	49.9		50.0	100
Molybdenum	26.3		25.0	105	48.5		50.0	97	49.9		50.0	100
Nickel	26.3		25.0	105	48.6		50.0	97	47.9		50.0	96
Selenium	24.8		25.0	99	51.7		50.0	103	52.0		50.0	104
Silver	24.9		25.0	100	49.9		50.0	100	50.6		50.0	101
Thallium	25.9		25.0	104	53.0		50.0	106	51.5		50.0	103
Vanadium	25.5		25.0	102	50.8		50.0	102	51.0		50.0	102
Zinc	27.4		25.0	110	50.3		50.0	101	50.7		50.0	101
Beryllium	24.8		25.0	99	60.9		50.0	122	55.8		50.0	112

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICV Source: MEICPMS4 ICV_00211 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00211

Analyte	CCV 440-99928/29 04/23/2013 11:36											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	51.2		50.0	102								
Arsenic	50.5		50.0	101								
Barium	50.7		50.0	101								
Cadmium	50.9		50.0	102								
Chromium	51.9		50.0	104								
Cobalt	51.5		50.0	103								
Copper	50.1		50.0	100								
Lead	50.6		50.0	101								
Molybdenum	49.8		50.0	100								
Nickel	49.7		50.0	99								
Selenium	51.5		50.0	103								
Silver	51.3		50.0	103								
Thallium	52.2		50.0	104								
Vanadium	51.8		50.0	104								
Zinc	50.4		50.0	101								
Beryllium	55.7		50.0	111								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99928/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.18	J	118	50-150
Arsenic	1.00	1.13		113	50-150
Beryllium	0.500	0.489	J	98	50-150
Cadmium	0.500	0.505	J	101	50-150
Barium	1.00	1.04		104	50-150
Chromium	1.00	1.01	J	101	50-150
Copper	1.00	1.07	J	107	50-150
Nickel	1.00	1.29	J	129	50-150
Lead	1.00	1.05		105	50-150
Selenium	1.00	1.05	J	105	50-150
Cobalt	0.500	0.530	J	106	50-150
Silver	1.00	1.05		105	50-150
Thallium	1.00	1.06		106	50-150
Molybdenum	1.00	1.05	J	105	50-150
Vanadium	2.00	2.09		104	50-150

Lab Sample ID: CRI 440-99928/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.17		108	50-150
Arsenic	2.00	2.00		100	50-150
Beryllium	1.00	0.987		99	50-150
Cadmium	1.00	1.03		103	50-150
Barium	2.00	2.14		107	50-150
Chromium	2.00	2.09		105	50-150
Copper	2.00	2.14		107	50-150
Nickel	2.00	2.36		118	50-150
Lead	2.00	2.10		105	50-150
Selenium	2.00	1.89	J	94	50-150
Cobalt	1.00	1.06		106	50-150
Silver	2.00	2.11		106	50-150
Thallium	2.00	2.09		105	50-150
Zinc	10.0	12.9	J	129	50-150
Molybdenum	2.00	2.07		104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99928/7 04/23/2013 09:13		CCB 440-99928/15 04/23/2013 11:04		CCB 440-99928/26 04/23/2013 11:29		CCB 440-99928/30 04/23/2013 11:39	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.430	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	0.637	J	0.592	J	0.571	J
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.415	J	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.153	J	0.150	J	0.120	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Lab Sample ID: ICSA 440-99928/12 Instrument ID: ICPMS5

Lab File ID: 013ICSA.d ICS Source: MEICPMS4 ICSA_00207

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.390**	
Arsenic		**0.219**	
Barium		**0.206**	
Cadmium		**1.13**	
Chromium		**1.39**	
Cobalt		**0.107**	
Copper		**1.04**	
Lead		**0.109**	
Molybdenum	**2000**	**2048**	**102**
Nickel		**0.753**	
Selenium		**-0.131**	
Silver		**0.0540**	
Thallium		**0.0270**	
Vanadium		**0.148**	
Zinc		**6.56**	
Aluminum	*100000*	*88366*	*88*
Beryllium		*0.0000*	
Calcium	*100000*	*93900*	*94*
Cerium		*0.0410*	
Iron	*100000*	*95250*	*95*
Magnesium	*100000*	*90697*	*91*
Manganese		*0.137*	
Potassium	*100000*	*94807*	*95*
Sodium	*100000*	*91480*	*91*
Sr		*4.93*	
Tin		*-0.0110*	
Uranium		*0.0100*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Lab Sample ID: ICSAB 440-99928/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00207

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.6**	**103**
Arsenic	**20.0**	**19.5**	**97**
Barium	**20.0**	**20.7**	**103**
Cadmium	**20.0**	**20.1**	**100**
Chromium	**20.0**	**19.8**	**99**
Cobalt	**20.0**	**18.5**	**93**
Copper	**20.0**	**18.8**	**94**
Lead	**20.0**	**18.7**	**94**
Molybdenum	**2020**	**2063**	**102**
Nickel	**20.0**	**19.1**	**96**
Selenium	**20.0**	**19.2**	**96**
Silver	**20.0**	**18.8**	**94**
Thallium	**20.0**	**18.7**	**93**
Vanadium	**20.0**	**18.9**	**95**
Zinc	**20.0**	**22.5**	**112**
Aluminum	*100000*	*89762*	*90*
Beryllium	*20.0*	*20.6*	*103*
Calcium	*101000*	*94756*	*94*
Cerium	*20.0*	*20.3*	*102*
Iron	*100000*	*94598*	*94*
Magnesium	*101000*	*92763*	*92*
Manganese	*20.0*	*18.9*	*94*
Potassium	*101000*	*95417*	*95*
Sodium	*101000*	*94020*	*94*
Sr	*20.0*	*25.6*	*128*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*19.9*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/23/2013 End Date: 04/23/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-99928/1 IC	08:59	100		100		100		100		100	
STD1 440-99928/2 IC	09:01	100		101		100		100		100	
STD2 440-99928/3 IC	09:04	101		100		99		100		102	
STD3 440-99928/4 IC	09:06	101		100		100		99		101	
STD4 440-99928/5 IC	09:08	99		99		98		99		100	
ICV 440-99928/6	09:10	99		99		98		99		100	
ICB 440-99928/7	09:13	100		100		98		98		100	
CRI 440-99928/8	09:15	100		99		99		99		100	
CRI 440-99928/9	09:17	99		100		98		98		100	
ICSAB 440-99928/11	09:22	87		103		100		97		98	
ICSA 440-99928/12	09:46	77		101		99		96		97	
CCV 440-99928/14	11:02	54		90		92		93		101	
CCB 440-99928/15	11:04	54		88		93		94		100	
MB 440-99721/1-A	11:07	55		89		93		94		102	
LCS 440-99721/2-A	11:09	57		93		100		101		107	
240-23078-A-4-A MS	11:13	60		100		99		99		101	
240-23078-A-4-B MSD	11:15	60		100		98		98		99	
240-23078-B-4-A PDS	11:18	62		100		98		99		100	
X 240-22976-2	11:20	62		104		102		101		101	
X 240-22976-5	11:22	67		107		107		106		107	
CCV 440-99928/25	11:27	74		106		102		102		106	
CCB 440-99928/26	11:29	73		101		102		102		105	
240-23078-B-3-A SD	11:34	74		102		103		103		106	
CCV 440-99928/29	11:36	75		103		103		104		106	
CCB 440-99928/30	11:39	75		103		104		104		107	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/23/2013 End Date: 04/23/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-99928/1 IC	08:59	100									
STD1 440-99928/2 IC	09:01	100									
STD2 440-99928/3 IC	09:04	100									
STD3 440-99928/4 IC	09:06	101									
STD4 440-99928/5 IC	09:08	101									
ICV 440-99928/6	09:10	100									
ICB 440-99928/7	09:13	100									
CRI 440-99928/8	09:15	101									
CRI 440-99928/9	09:17	100									
ICSAB 440-99928/11	09:22	102									
ICSA 440-99928/12	09:46	101									
CCV 440-99928/14	11:02	102									
CCB 440-99928/15	11:04	103									
MB 440-99721/1-A	11:07	104									
LCS 440-99721/2-A	11:09	110									
240-23078-A-4-A MS	11:13	103									
240-23078-A-4-B MSD	11:15	102									
240-23078-B-4-A PDS	11:18	101									
240-22976-2	11:20	101									
240-22976-5	11:22	107									
CCV 440-99928/25	11:27	104									
CCB 440-99928/26	11:29	104									
240-23078-B-3-A SD	11:34	105									
CCV 440-99928/29	11:36	105									
CCB 440-99928/30	11:39	106									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/25/2013 13:52 End Date: 04/25/2013 15:51

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn								
STD0 440-100537/1 IC	1		13:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD1 440-100537/2 IC	1		13:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD2 440-100537/3 IC	1		13:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD3 440-100537/4 IC	1		13:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD4 440-100537/5 IC	1		14:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			14:04																								
ZZZZZZ			14:06																								
CRI 440-100537/8	1		14:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 440-100537/9	1		14:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICV 440-100537/10	1		14:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICB 440-100537/11	1		14:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSA 440-100537/12	1		14:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSAB 440-100537/13	1		14:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 440-100537/14	1		15:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-100537/15	1		15:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
MB 440-100229/1-A	1	R	15:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
LCS 440-100229/2-A	1	R	15:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-22976-3	1	R	15:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-22976-3 MS	1	R	15:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-22976-3 MSD	1	R	15:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-22976-3 PDS	1	R	15:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-22976-3 SD	5	R	15:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 440-100537/23	1		15:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-100537/24	1		15:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICV Source: MEICPMS4 ICV_00211 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00211

Analyte	ICV 440-100537/10 04/25/2013 14:13				CCV 440-100537/14 04/25/2013 15:27				CCV 440-100537/23 04/25/2013 15:48			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.3		25.0	93	50.1		50.0	100	50.0		50.0	100
Arsenic	25.8		25.0	103	49.6		50.0	99	49.8		50.0	100
Barium	26.1		25.0	105	50.2		50.0	100	50.5		50.0	101
Beryllium	25.3		25.0	101	52.9		50.0	106	52.5		50.0	105
Cadmium	25.3		25.0	101	50.0		50.0	100	49.7		50.0	99
Chromium	26.1		25.0	104	51.9		50.0	104	50.8		50.0	102
Cobalt	25.3		25.0	101	51.9		50.0	104	50.2		50.0	100
Copper	25.7		25.0	103	51.7		50.0	103	49.5		50.0	99
Lead	25.5		25.0	102	49.7		50.0	99	48.7		50.0	97
Molybdenum	26.2		25.0	105	50.0		50.0	100	49.7		50.0	99
Nickel	26.0		25.0	104	51.1		50.0	102	49.3		50.0	99
Selenium	26.0		25.0	104	50.5		50.0	101	50.4		50.0	101
Silver	27.3		25.0	109	50.1		50.0	100	50.3		50.0	101
Thallium	25.7		25.0	103	51.1		50.0	102	50.6		50.0	101
Vanadium	25.5		25.0	102	51.8		50.0	104	51.9		50.0	104
Zinc	23.3		25.0	93	53.9		50.0	108	53.8		50.0	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99928/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	4.00	4.13		103	50-150

Lab Sample ID: CRI 440-100537/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.13	J	113	50-150
Arsenic	1.00	1.10		110	50-150
Beryllium	0.500	0.511		102	50-150
Cadmium	0.500	0.504	J	101	50-150
Barium	1.00	1.06		106	50-150
Chromium	1.00	1.17	J	117	50-150
Copper	1.00	1.35	J	135	50-150
Nickel	1.00	1.50	J	150	50-150
Lead	1.00	1.06		106	50-150
Selenium	1.00	1.04	J	104	50-150
Cobalt	0.500	0.544	J	109	50-150
Silver	1.00	1.14		114	50-150
Thallium	1.00	1.06		106	50-150
Zinc	5.00	20	U	32	50-150
Molybdenum	1.00	1.07	J	107	50-150
Vanadium	2.00	2.13		106	50-150

Lab Sample ID: CRI 440-100537/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.15		107	50-150
Arsenic	2.00	2.13		106	50-150
Beryllium	1.00	1.04		104	50-150
Cadmium	1.00	1.02		102	50-150
Barium	2.00	2.14		107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-100537/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Chromium	2.00	2.58		129	50-150
Copper	2.00	2.24		112	50-150
Nickel	2.00	2.57		129	50-150
Lead	2.00	2.09		105	50-150
Selenium	2.00	1.77	J	89	50-150
Cobalt	1.00	1.06		106	50-150
Silver	2.00	2.28		114	50-150
Thallium	2.00	2.10		105	50-150
Zinc	10.0	9.94	J	99	50-150
Molybdenum	2.00	2.13		106	50-150
Vanadium	4.00	4.26		106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-100537/11 04/25/2013 14:16		CCB 440-100537/15 04/25/2013 15:29		CCB 440-100537/24 04/25/2013 15:51			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.491	J	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	2.0	U	0.220	J	2.0	U		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Lab Sample ID: ICSA 440-100537/12 Instrument ID: ICPMS5

Lab File ID: 013ICSA.d ICS Source: MEICPMS4 ICSA_00207

Concentration Units: ug/L

Analyte	True	Found	
	Solution A	Solution A	Percent Recovery
Antimony		**0.540**	
Arsenic		**0.130**	
Barium		**0.219**	
Beryllium		**0.0140**	
Cadmium		**1.00**	
Chromium		**1.42**	
Cobalt		**0.0960**	
Copper		**0.949**	
Lead		**0.115**	
Molybdenum	**2000**	**2115**	**106**
Nickel		**1.05**	
Selenium		**-0.0780**	
Silver		**0.0560**	
Thallium		**0.0120**	
Vanadium		**0.190**	
Zinc		**1.60**	
Aluminum	*100000*	*88653*	*89*
Calcium	*100000*	*92968*	*93*
Cerium		*0.0410*	
Iron	*100000*	*92932*	*93*
Magnesium	*100000*	*91542*	*92*
Manganese		*0.112*	
Potassium	*100000*	*93889*	*94*
Sodium	*100000*	*91777*	*92*
Sr		*4.97*	
Tin		*0.126*	
Uranium		*0.0100*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

Lab Sample ID: ICSAB 440-100537/13 Instrument ID: ICPMS5

Lab File ID: 014ICSB.d ICS Source: MEICPMS4 ICSB_00207

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**20.0**	**20.8**	**104**
Arsenic	**20.0**	**20.0**	**100**
Barium	**20.0**	**20.9**	**104**
Beryllium	**20.0**	**21.9**	**109**
Cadmium	**20.0**	**20.4**	**102**
Chromium	**20.0**	**20.5**	**103**
Cobalt	**20.0**	**18.9**	**95**
Copper	**20.0**	**19.3**	**96**
Lead	**20.0**	**19.1**	**95**
Molybdenum	**2020**	**2129**	**105**
Nickel	**20.0**	**19.3**	**97**
Selenium	**20.0**	**19.5**	**97**
Silver	**20.0**	**21.1**	**106**
Thallium	**20.0**	**18.8**	**94**
Vanadium	**20.0**	**19.8**	**99**
Zinc	**20.0**	**18.5**	**92**
Aluminum	*100000*	*88634*	*89*
Calcium	*101000*	*95819*	*95*
Cerium	*20.0*	*20.8*	*104*
Iron	*100000*	*94797*	*95*
Magnesium	*101000*	*92868*	*92*
Manganese	*20.0*	*19.3*	*96*
Potassium	*101000*	*95305*	*95*
Sodium	*101000*	*92210*	*92*
Sr	*20.0*	*26.4*	*132*
Tin	*20.0*	*20.9*	*104*
Uranium	*20.0*	*19.8*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/25/2013 End Date: 04/25/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-100537/1	13:52	100		100		100		100		100	
STD1 440-100537/2	13:55	101		102		103		103		103	
STD2 440-100537/3	13:57	101		103		101		101		102	
STD3 440-100537/4	13:59	99		102		101		101		102	
STD4 440-100537/5	14:02	98		102		101		102		101	
CRI 440-100537/8	14:09	96		101		101		102		103	
CRI 440-100537/9	14:11	94		101		101		102		102	
ICV 440-100537/10	14:13	95		103		101		102		103	
ICB 440-100537/11	14:16	90		96		97		97		97	
ICSA 440-100537/12	14:18	83		103		99		97		94	
ICSAB 440-100537/13	14:20	79		101		98		96		94	
CCV 440-100537/14	15:27	71		89		94		95		100	
CCB 440-100537/15	15:29	70		91		96		97		101	
MB 440-100229/1-A	15:31	70		90		95		95		101	
LCS 440-100229/2-A	15:34	70		90		96		97		101	
240-22976-3	15:36	65		95		97		97		98	
240-22976-3 MS	15:38	70		102		98		98		98	
240-22976-3 MSD	15:40	71		100		97		97		98	
240-22976-3 PDS	15:43	72		99		97		97		98	
240-22976-3 SD	15:45	75		96		99		99		101	
CCV 440-100537/23	15:48	77		96		97		97		101	
CCB 440-100537/24	15:51	75		94		97		98		100	

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Irvine Job No.: 240-22976-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/25/2013 End Date: 04/25/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-100537/1	13:52	100									
STD1 440-100537/2	13:55	102									
STD2 440-100537/3	13:57	103									
STD3 440-100537/4	13:59	103									
STD4 440-100537/5	14:02	103									
CRI 440-100537/8	14:09	103									
CRI 440-100537/9	14:11	102									
ICV 440-100537/10	14:13	104									
ICB 440-100537/11	14:16	99									
ICSA 440-100537/12	14:18	98									
ICSAB 440-100537/13	14:20	98									
CCV 440-100537/14	15:27	101									
CCB 440-100537/15	15:29	102									
MB 440-100229/1-A	15:31	102									
LCS 440-100229/2-A	15:34	103									
240-22976-3	15:36	102									
240-22976-3 MS	15:38	101									
240-22976-3 MSD	15:40	100									
240-22976-3 PDS	15:43	100									
240-22976-3 SD	15:45	102									
CCV 440-100537/23	15:48	103									
CCB 440-100537/24	15:51	102									

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**T. APANAVAGE**	**DATE:**	**May 15, 2013**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOCs, PERCHLORATE, SELECT METALS**
LOCKHEED-MIDDLE RIVER COMPLEX (MRC)
SDG 240-23078-1

SAMPLES: 4/Aqueous/

MRC-MW-01A-041013	MRC-MW-02A-041013
MRC-MW-05A-041013	TB-041013

Overview

The sample set for Lockheed MRC, SDG 240-23078-1, consists of three (3) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for volatile organic compounds (VOCs). Sample MRC-MW-01A-041013 was analyzed for perchlorate. Samples MRC-MW-01A-041013, MRC-MW-02A-041013, and MRC-MW-05A-041013 were analyzed for select metals. The samples were collected by Tetra Tech April 10th, 2013 and analyzed by TestAmerica. VOC analyses were conducted using method 8260B. Perchlorate analyses were conducted using method 6850. Metals analyses were conducted using method 6020A. Mercury analyses were conducted using method 7470A

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, GC/MS tuning, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, surrogate standard recoveries, laboratory control sample recoveries, matrix spike recoveries, chromatographic resolution, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- The initial calibration analyzed on 4/4/13 on instrument A3UX15 had a relative response factor < 0.05 for tert-butyl alcohol and vinyl acetate. All samples were affected. Non-detected results were qualified as rejected (UR).

- The continuing calibration analyzed on 4/17/13 on instrument A3UX15 had a relative response factor < 0.05 for tert-butyl alcohol and vinyl acetate. All samples were affected. Non-detected results were qualified as rejected (UR).

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Methylene Chloride [1]	0.78 ug/L	7.8 ug/L
Barium [2]	0.33 ug/L	1.65 ug/L
Antimony [3]	0.43 ug/L	2.1 ug/L
Copper [3]	0.63 ug/L	3.1 ug/L
Molybdenum [3]	0.41 ug/L	2.1 ug/L
Silver [3]	0.15 ug/L	0.75 ug/L

[1] Maximum concentration found in preparation blanks affecting all VOC samples.
[2] Maximum concentration found in preparation blanks affecting samples in preparation batch 99721.
[3] Maximum concentration found in a calibration blank affecting samples analyzed on 4/23/13.

An action level of 5X or 10X (methylene chloride) the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The continuing calibration analyzed on 4/17/13 on instrument A3UX15 had a percent difference >25% for hexachlorobutadiene and naphthalene. All samples were affected. Non-detected results were qualified as estimated (UJ).

- The CRDL standard analyzed on 4/23/13 had a percent recovery >110% for antimony, arsenic, nickel, and zinc. All samples were affected. Positive results <2X CRDL for antimony, arsenic, and zinc were qualified as estimated (J) due to conflicting directional bias. Non-detected antimony and arsenic resulted were qualified as not qualified. Nickel results were not qualified as sample results were > 2XCRDL.

- The interference standard analyzed on 4/24/13 had a percent recovery > 120% for beryllium. All samples were affected. The positive results were qualified as biased high (K). The non-detected result was not qualified.

Notes

Non-detected results were reported at the MDL.

The CRDL standard analyzed on 4/29/13 had a percent recovery >120% for mercury. All samples were affected. No validation action was warranted as sample results were non-detected.

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted in the qualification of sample results. Continuing calibration and CRDL non-compliances for hexachlorobutadiene, antimony, arsenic, nickel, and zinc resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Interference standard non-compliances for beryllium resulted in the qualification of sample results.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993) and U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW-01A-041013			MRC-MW-02A-041013			MRC-MW-05A-041013		
SDG: 240-23078-1	LAB_ID	240-23078-3			240-23078-2			240-23078-4		
FRACTION: M	SAMP_DATE	4/10/2013			4/10/2013			4/10/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.4	B	A	0.3	U		0.3	U	
ARSENIC		1.1	J	CP	0.9	U		1	J	CP
BARIUM		38			110			290		
BERYLLIUM		0.1	U		5	K	K	13	K	K
CADMIUM		0.1	U		0.23	J	P	0.69	J	P
CHROMIUM		0.9	U		0.9	U		0.9	U	
COBALT		0.72	J	P	75			220		
COPPER		8.2			58			12		
LEAD		0.52	J	P	0.4	J	P	1.1		
MERCURY		0.1	U		0.1	U		0.1	U	
MOLYBDENUM		0.48	B	A	0.79	B	A	0.38	B	A
NICKEL		4.2			110			330		
SELENIUM		0.5	U		0.5	U		0.5	U	
SILVER		0.1	U		0.1	U		0.1	B	A
THALLIUM		0.2	U		0.2	U		0.23	J	P
VANADIUM		3.1	J	P	1.9	J	P	1.1	J	P
ZINC		5.3	J	CP	93			500		

PROJ_NO: 04795	NSAMPLE	MRC-MW-01A-041013		
SDG: 240-23078-1	LAB_ID	240-23078-3		
FRACTION: MISC	SAMP_DATE	4/10/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
PERCHLORATE		0.17	J	P

PROJ_NO: 04795	NSAMPLE	MRC-MW-02A-041013			TB-041013		
SDG: 240-23078-1	LAB_ID	240-23078-2			240-23078-1		
FRACTION: OV	SAMP_DATE	4/10/2013			4/10/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-02A-041013			TB-041013		
SDG: 240-23078-1	LAB_ID	240-23078-2			240-23078-1		
FRACTION: OV	SAMP_DATE	4/10/2013			4/10/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		1.1			0.31	U	
DICHLOROFLUOROMETHANE		0.76	J	P			
DIISOPROPYL ETHER		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	UJ	C	0.3	UJ	C
ISOPROPYLBENZENE		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
STYRENE		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	U		3.9	U	
TETRACHLOROETHENE		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-02A-041013			TB-041013		
SDG: 240-23078-1	LAB_ID	240-23078-2			240-23078-1		
FRACTION: OV	SAMP_DATE	4/10/2013			4/10/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		3.7			0.21	U	
VINYL ACETATE		0.19	U		0.19	U	
VINYL CHLORIDE		0.22	U		0.22	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Client Sample ID: MRC-MW-02A-041013 Lab Sample ID: 240-23078-2

Matrix: Water Lab File ID: UXC0912.D

Analysis Method: 8260B Date Collected: 04/10/2013 12:02

Sample wt/vol: 5(mL) Date Analyzed: 04/17/2013 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82310 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.1		1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23078-1

SDG No.:

Client Sample ID: MRC-MW-02A-041013 | Lab Sample ID: 240-23078-2

Matrix: Water | Lab File ID: UXC0912.D

Analysis Method: 8260B | Date Collected: 04/10/2013 12:02

Sample wt/vol: 5(mL) | Date Analyzed: 04/17/2013 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	3.7		1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23078-1

SDG No.:

Client Sample ID: MRC-MW-02A-041013 | Lab Sample ID: 240-23078-2

Matrix: Water | Lab File ID: UXC0912.D

Analysis Method: 8260B | Date Collected: 04/10/2013 12:02

Sample wt/vol: 5(mL) | Date Analyzed: 04/17/2013 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	92		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-23078-1

SDG No.:

Client Sample ID: MRC-MW-02A-041013 | Lab Sample ID: 240-23078-2

Matrix: Water | Lab File ID: UXC0912.D

Analysis Method: 8260B | Date Collected: 04/10/2013 12:02

Sample wt/vol: 5(mL) | Date Analyzed: 04/17/2013 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82310 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 0.76

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
75-43-4	Dichlorofluoromethane	1.80	0.76	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23078-1

SDG No.:

Client Sample ID: TB-041013 | Lab Sample ID: 240-23078-1

Matrix: Water | Lab File ID: UXC0911.D

Analysis Method: 8260B | Date Collected: 04/10/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/17/2013 17:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23078-1

SDG No.:

Client Sample ID: TB-041013 | Lab Sample ID: 240-23078-1

Matrix: Water | Lab File ID: UXC0911.D

Analysis Method: 8260B | Date Collected: 04/10/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/17/2013 17:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Client Sample ID: TB-041013 Lab Sample ID: 240-23078-1

Matrix: Water Lab File ID: UXC0911.D

Analysis Method: 8260B Date Collected: 04/10/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/17/2013 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82310 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Client Sample ID: TB-041013 Lab Sample ID: 240-23078-1

Matrix: Water Lab File ID: UXC0911.D

Analysis Method: 8260B Date Collected: 04/10/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/17/2013 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82310 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Client Sample ID: MRC-MW-01A-041013 Lab Sample ID: 240-23078-3

Matrix: Water Lab File ID: 17APR13-Perc-092.d

Analysis Method: 6850 Date Collected: 04/10/2013 13:40

Extraction Method: Filtration Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) Date Analyzed: 04/18/2013 11:45

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.17	J	0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-01A-041013 Lab Sample ID: 240-23078-3

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG ID.:

Matrix: Water Date Sampled: 04/10/2013 13:40

Reporting Basis: WET Date Received: 04/11/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-02A-041013 Lab Sample ID: 240-23078-2

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG ID.:

Matrix: Water Date Sampled: 04/10/2013 12:02

Reporting Basis: WET Date Received: 04/11/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-05A-041013 Lab Sample ID: 240-23078-4

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG ID.:

Matrix: Water Date Sampled: 04/10/2013 14:52

Reporting Basis: WET Date Received: 04/11/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-01A-041013 Lab Sample ID: 240-23078-3

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG ID.:

Matrix: Water Date Sampled: 04/10/2013 13:40

Reporting Basis: WET Date Received: 04/11/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.40	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	1.1	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	38	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	8.2	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	4.2	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.52	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	0.72	1.0	0.10	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	5.3	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	0.48	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	3.1	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-02A-041013 Lab Sample ID: 240-23078-2

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG ID.:

Matrix: Water Date Sampled: 04/10/2013 12:02

Reporting Basis: WET Date Received: 04/11/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	5.0	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.23	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	110	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	58	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	110	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.40	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	75	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	93	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.79	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	1.9	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-05A-041013 Lab Sample ID: 240-23078-4

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG ID.:

Matrix: Water Date Sampled: 04/10/2013 14:52

Reporting Basis: WET Date Received: 04/11/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	1.0	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	13	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.69	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	290	5.0	0.30	ug/L		B	1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	12	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	330	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.1	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	220	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.10	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.23	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	500	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.38	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	1.1	20	0.80	ug/L	J		1	6020

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown, MD	Email:			
Phone: 301 528-3021				
Project Name: MRC- Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04795-02	Shipping/Tracking No:			
PO#				

Analysis Turnaround Time (Calendar Days)

TAT if different from below _____
☐ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

Analyses

Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C/G)	VOCs	Total metals	Perchlorate	Sample Specific Notes / Special Instructions:
TB-041013	4-10-13	—		X						2					N	G	X			
MRC-MW-02A-041013	↓	1202		X					1	3					↓	↓	X	X		
MRC-MW-01A-041013	↓	1340		X					1				1		↓	↓		X	X	
MRC-MW-05A-041013	↓	1452		X					3						↓	↓		X		* MS/MSD

240-23078 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	JT Inc	4-10-13 / 1600	[signature]	TestAmerica	4/10/13 / 1600
[signature]	TestAmerica	4/10/13 / 1715	[signature]	TAC	4/11/13 900
			Received in Laboratory by:		

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TAL-0018 (1008)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC Groundwater Sampling

Report Number: 240-23078-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Total Recoverable Metals and the 7470A Total Mercury analyses were performed at the TestAmerica Irvine laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/11/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.8 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-041013 (240-23078-1) and MRC-MW-02A-041013 (240-23078-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/17/2013.

Methylene Chloride was detected in method blank MB 240-82310/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

PERCHLORATE

Sample MRC-MW-01A-041013 (240-23078-3) was analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 04/16/2013 and analyzed on 04/18/2013.

No difficulties were encountered during the perchlorate analysis. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW-02A-041013 (240-23078-2), MRC-MW-01A-041013 (240-23078-3) and MRC-MW-05A-041013 (240-23078-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/22/2013 and analyzed on 04/23/2013 and 04/24/2013.

Barium was detected in method blank MB 440-99721/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW-02A-041013 (240-23078-2), MRC-MW-01A-041013 (240-23078-3) and MRC-MW-05A-041013 (240-23078-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 04/29/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX15\20130417-18958.b\UXC0912.D		
Lims ID:	240-23078-C-2	Client ID:	MRC-MW-02A-041013
Inject. Date:	17-Apr-2013 18:03:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0018958-022		
Misc. Info.:	C30417A,8260LLUX15,,43582		
Operator:	43582	Instrument ID:	A3UX15
Purge Vol:	5.000 mL	ALS Bottle#:	21
Lims Batch ID:	82310	Lims Sample ID:	22
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX15\20130417-18958.b\8260_15.m		
Last Update:	18-Apr-2013 12:04:13	Calib Date:	04-Apr-2013 16:10:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX15\20130404-18552.b\UXC0384.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK030		

First Level Reviewer: evansle Date: 18-Apr-2013 11:52:46

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	4.656	4.656	0.0	99	1542760	10.0	
* 2 Chlorobenzene-d5	117	7.301	7.301	0.0	86	1046837	10.0	
* 3 1,4-Dichlorobenzene-d4	152	9.506	9.506	0.0	94	481507	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.111	4.111	0.0	64	368031	8.19	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.383	4.383	0.0	0	449729	9.32	
$ 7 Toluene-d8 (Surr)	98	6.008	6.008	0.0	94	1394861	7.99	
$ 131 4-Bromofluorobenzene (Surr)	95	8.403	8.392	0.011	96	415751	7.66	
12 Dichlorodifluoromethane	85	1.158	1.158	0.0	84	66865	1.11	
13 Chloromethane	50		1.265					9
14 Vinyl chloride	62		1.348					
15 Bromomethane	94		1.573					
16 Chloroethane	64		1.656					
18 Trichlorofluoromethane	101	1.846	1.846	0.0	83	326602	3.72	
21 1,1-Dichloroethene	96		2.261					9
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.273					
22 Acetone	43	2.308	2.308	0.0	87	13500	0.2020	
26 Carbon disulfide	76		2.427					
30 Methylene Chloride	84		2.652					
31 2-Methyl-2-propanol	59		2.759					9
33 trans-1,2-Dichloroethene	96		2.877					9
34 Methyl tert-butyl ether	73		2.889					
36 1,1-Dichloroethane	63		3.233					9
37 Vinyl acetate	86		3.281					9
38 Isopropyl ether	87		3.292					
40 Tert-butyl ethyl ether	59		3.589					9
42 cis-1,2-Dichloroethene	96		3.708					9
43 2,2-Dichloropropane	77		3.708					
41 2-Butanone (MEK)	43		3.719					
47 Chlorobromomethane	128		3.909					9
49 Chloroform	83	3.968	3.968	0.0	62	11062	0.1264	

$\frac{326602}{1542760} \times \frac{10}{0.5693} = 3.71$

reportedas 3.7 ug/L

Sample Report

MRC-MW-05A-041013

Sample Table

Sample Name	240-23078-b-4-a
Data File Name	048SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1304
Acq Date Time	2013-04-23T11:11:33-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-99721 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

→ 501.4 mg/L reported as 500 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	14.477	14.477	2.53	49691	1.79	3000	
Na	23	1	No Gas	OR	OR	#VALUE!	OR	#VALUE!	100000	
Mg	24	1	No Gas	11987.822	11987.822	1.27	265681101	0.84	112500	
Al	27	1	No Gas	644.015	644.015	2.57	18235315	3.93	4000	
K	39	1	No Gas	8218.733	8218.733	0.57	299789464	1.58	87500	
Ca	44	1	No Gas	28638.873	28638.873	1.32	32658912	0.85	225000	
V	51	1	No Gas	1.051	1.051	2.23	49588	3.72	4000	
Cr	52	1	No Gas	0.730	0.730	2.81	52216	0.75	4000	
Mn	55	1	No Gas	980.674	980.674	0.20	51715141	1.89	4000	
Fe	56	1	No Gas	899.425	899.425	2.63	41645258	2.53	40000	
Co	59	1	No Gas	219.904	219.904	1.25	9398062	1.17	4000	
Ni	60	1	No Gas	329.463	329.463	0.62	3093049	1.96	4000	
Cu	65	1	No Gas	11.556	11.556	2.66	122522	0.57	4000	
Zn	66	1	No Gas	501.436	501.436	0.62	3498846	0.26	2500	
As	75	1	No Gas	1.047	1.047	4.01	5560	3.93	4000	
Se	82	1	No Gas	0.361	0.361	95.30	268	51.42	4000	
Sr	88	1	No Gas	151.305	151.305	1.45	9074555	0.70	4000	
Mo	95	1	No Gas	0.382	0.382	3.45	5286	2.77	4000	
[Mo]	98	1	No Gas	0.371	0.371	2.82	8363	2.38	4000	
Ag	107	1	No Gas	0.101	0.101	22.94	3745	16.12	100	
Cd	111	1	No Gas	0.689	0.689	2.86	3963	2.31	4000	
[Cd]	114	1	No Gas	0.687	0.687	2.07	8442	0.76	4000	
Sn	118	1	No Gas	0.234	0.234	6.04	7955	3.51	4000	
Sb	123	1	No Gas	0.190	0.190	5.35	6110	2.39	4000	
Ba	137	1	No Gas	294.489	294.489	1.58	2567521	1.48	4000	
Ce	140	1	No Gas	5.813	5.813	0.77	463175	0.68	4000	
Tl	205	1	No Gas	0.234	0.234	2.22	10399	1.86	4000	
Pb	208	1	No Gas	1.052	1.052	0.41	64013	1.02	4000	
U	238	1	No Gas	0.203	0.203	2.28	13707	2.19	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	774669	2.12	1352296	57.29	60	120	ISTD Failed
Sc-45 (IS)	45	1	No Gas	4033830	2.03	3982762	101.28	60	120	
Ge (IS)	72	1	No Gas	825720	0.50	815552	101.25	60	120	
Ge (IS)	74	1	No Gas	1155282	0.99	1131439	102.11	60	120	
In-115 (IS)	115	1	No Gas	5285411	1.42	5033493	105.00	60	120	
Tb-159 (IS)	159	1	No Gas	7015075	0.64	6591141	106.43	60	120	

TestAmerica Canton Sample Receipt Form/Narrative Login # : 23078

Client TETRA TECH Site Name _____ By: _____ (Signature)

Cooler Received on 4-11-13 Opened on 4-11-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1 (CF 0°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 4G (CF +1°C)	Observed Sample Temp. 0.8 °C	Corrected Sample Temp. 1.8 °C	☐ Multiple on Back
IR GUN# 5G (CF +1 °C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 8 (CF +1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s).

Nitric Acid Lot# 031512-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
	pH Strip Lot# HC256691		
02A ~~1340~~ 9-	<2 ~~<2~~ 4/11/13 9-	4-11-13	TCS
05A ~~1452~~ 9-	<2 <2 <2	4-11-13	TCS
		↓	↓
01A	<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23078-1

Login Number: 23078
List Number: 1
Creator: King, Ronald

List Source: TestAmerica Irvine
List Creation: 04/12/13 03:38 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23078-1

Login Number: 23078
List Number: 1
Creator: Huggins, Relda

List Source: TestAmerica Sacramento
List Creation: 04/12/13 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-22976-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/29/2013	4/29/2013	19	0	19
HG	UG/L	MRC-MW-05A-041013	240-23078-4	NM	4/10/2013	4/29/2013	4/29/2013	19	0	19
HG	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/29/2013	4/29/2013	20	0	20
HG	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/29/2013	4/29/2013	20	0	20
HG	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/29/2013	4/29/2013	20	0	20
HG	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/29/2013	4/29/2013	19	0	19
M	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/22/2013	4/23/2013	13	1	14
M	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/22/2013	4/23/2013	12	1	13
M	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/22/2013	4/24/2013	12	2	14
M	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/22/2013	4/23/2013	12	1	13
M	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/22/2013	4/24/2013	12	2	14
M	UG/L	MRC-MW-05A-041013	240-23078-4	NM	4/10/2013	4/22/2013	4/23/2013	12	1	13
M	UG/L	MRC-MW-05A-041013	240-23078-4	NM	4/10/2013	4/22/2013	4/24/2013	12	2	14
M	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/22/2013	4/24/2013	13	2	15
M	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/22/2013	4/24/2013	13	2	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/24/2013	4/25/2013	15	1	16
M	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/22/2013	4/23/2013	13	1	14
PCL	UG/L	MRC-MW-54A-040913	240-22976-4	NM	4/9/2013	4/16/2013	4/18/2013	7	2	9
PCL	UG/L	MRC-MW-01A-041013	240-23078-3	NM	4/10/2013	4/16/2013	4/18/2013	6	2	8
OS	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OS	UG/L	MRC-MW-15A-040913	240-22976-2	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OS	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OS	UG/L	MRC-MW-54A-040913	240-22976-4	NM	4/9/2013	4/15/2013	4/20/2013	6	5	11
OV	UG/L	MRC-MW-02A-041013	240-23078-2	NM	4/10/2013	4/17/2013	4/17/2013	7	0	7
OV	UG/L	MRC-MW-11A-040913	240-22976-5	NM	4/9/2013	4/15/2013	4/15/2013	6	0	6
OV	UG/L	MRC-MW-16A-040913	240-22976-3	NM	4/9/2013	4/15/2013	4/15/2013	6	0	6
OV	UG/L	TB-040913	240-22976-1	NM	4/9/2013	4/15/2013	4/15/2013	6	0	6
OV	UG/L	TB-041013	240-23078-1	NM	4/10/2013	4/17/2013	4/17/2013	7	0	7

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab File ID: UXC0895.D Lab Sample ID: MB 240-82310/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/17/2013 11:40

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-82310/4	UXC0894.D	04/17/2013 11:17
TB-041013	240-23078-1	UXC0911.D	04/17/2013 17:41
MRC-MW-02A-041013	240-23078-2	UXC0912.D	04/17/2013 18:03
	240-23065-A-4 MS	UXC0916.D	04/17/2013 19:32
	240-23065-A-4 MSD	UXC0917.D	04/17/2013 19:54

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-82310/5

Matrix: Water Lab File ID: UXC0895.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/17/2013 11:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82310 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-82310/5

Matrix: Water Lab File ID: UXC0895.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/17/2013 11:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82310 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	0.785	J	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23078-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-82310/5

Matrix: Water | Lab File ID: UXC0895.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/17/2013 11:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82310 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-82310/5

Matrix: Water Lab File ID: UXC0895.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/17/2013 11:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82310 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0894.D

Lab ID: LCS 240-82310/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	15.7	78	43-136	
Benzene	10.0	9.57	96	83-112	
Bromobenzene	10.0	8.90	89	76-115	
Bromochloromethane	10.0	9.39	94	77-120	
Bromodichloromethane	10.0	9.83	98	72-121	
Bromoform	10.0	7.82	78	40-131	
Bromomethane	10.0	6.79	68	11-185	
2-Butanone	20.0	18.0	90	60-126	
Carbon disulfide	10.0	11.4	114	62-142	
Carbon tetrachloride	10.0	9.39	94	66-128	
Chlorobenzene	10.0	9.38	94	85-110	
Chloroethane	10.0	8.25	82	25-153	
2-Chloroethyl vinyl ether	10.0	7.85 J	78	52-131	
Chloroform	10.0	10.1	101	79-117	
Chloromethane	10.0	7.73	77	44-126	
2-Chlorotoluene	10.0	9.28	93	76-116	
4-Chlorotoluene	10.0	9.39	94	77-115	
cis-1,2-Dichloroethene	10.0	9.59	96	80-113	
cis-1,3-Dichloropropene	10.0	7.92	79	61-115	
Dibromochloromethane	10.0	8.16	82	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.35	83	42-136	
1,2-Dibromoethane	10.0	9.69	97	79-113	
Dibromomethane	10.0	9.37	94	81-120	
1,2-Dichlorobenzene	10.0	9.33	93	81-110	
1,3-Dichlorobenzene	10.0	9.19	92	80-110	
1,4-Dichlorobenzene	10.0	8.96	90	82-110	
Dichlorodifluoromethane	10.0	5.23	52	19-129	
1,1-Dichloroethane	10.0	10.1	101	82-115	
1,2-Dichloroethane	10.0	9.34	93	71-127	
1,1-Dichloroethene	10.0	9.19	92	78-131	
1,2-Dichloropropane	10.0	9.58	96	81-115	
1,3-Dichloropropane	10.0	9.19	92	79-116	
2,2-Dichloropropane	10.0	9.27	93	50-129	
1,1-Dichloropropene	10.0	9.16	92	83-114	
Diisopropyl ether	10.0	9.33	93	77-118	
Ethylbenzene	10.0	9.70	97	83-112	
Hexachlorobutadiene	10.0	7.38	74	36-134	
2-Hexanone	20.0	20.7	104	55-133	
Isopropylbenzene	10.0	10.2	102	75-114	
Methylene Chloride	10.0	10.6	106	66-131	
4-Methyl-2-pentanone	20.0	19.0	95	63-128	
Methyl tert-butyl ether	10.0	9.09	91	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0894.D

Lab ID: LCS 240-82310/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.0	100	83-113	
Naphthalene	10.0	6.61	66	32-141	
n-Butylbenzene	10.0	9.90	99	66-125	
n-Propylbenzene	10.0	9.59	96	74-121	
o-Xylene	10.0	10.5	105	83-113	
p-Isopropyltoluene	10.0	10.1	101	74-120	
sec-Butylbenzene	10.0	9.56	96	70-117	
Styrene	10.0	9.57	96	79-114	
tert-Butyl alcohol	200	185	93	70-130	
tert-Butylbenzene	10.0	9.64	96	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.99	100	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.47	85	68-118	
Tetrachloroethene	10.0	8.83	88	79-114	
Toluene	10.0	9.54	95	84-111	
trans-1,2-Dichloroethene	10.0	9.31	93	83-117	
trans-1,3-Dichloropropene	10.0	7.96	80	58-117	
1,2,3-Trichlorobenzene	10.0	7.52	75	54-126	
1,2,4-Trichlorobenzene	10.0	7.34	73	48-135	
1,1,1-Trichloroethane	10.0	9.15	92	74-118	
Trichloroethene	10.0	9.30	93	76-117	
Trichlorofluoromethane	10.0	7.52	75	49-157	
1,2,3-Trichloropropane	10.0	7.94	79	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.97	100	74-151	
1,2,3-Trimethylbenzene	10.0	9.75	97	70-130	
1,2,4-Trimethylbenzene	10.0	9.83	98	76-120	
Vinyl acetate	10.0	7.93	79	46-161	
Vinyl chloride	10.0	7.85	78	53-127	
Xylenes, Total	30.0	30.5	102	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0916.D

Lab ID: 240-23065-A-4 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20000	5000 U	17900	90	33-145	
Benzene	10000	24000	34200	101	72-121	
Bromobenzene	10000	1000 U	8610	86	71-116	
Bromochloromethane	10000	1000 U	8840	88	73-121	
Bromodichloromethane	10000	1000 U	9230	92	67-120	
Bromoform	10000	1000 U	7900	79	32-128	
Bromomethane	10000	1000 U	5970	60	10-186	
2-Butanone	20000	5000 U	17900	90	54-129	
Carbon disulfide	10000	1000 U	10500	105	57-147	
Carbon tetrachloride	10000	1000 U	8560	86	59-129	
Chlorobenzene	10000	5000	14600	95	80-110	
Chloroethane	10000	1000 U	7170	72	21-165	
2-Chloroethyl vinyl ether	10000	10000 U	7550 J	75	10-150	
Chloroform	10000	1000 U	9240	92	76-118	
Chloromethane	10000	1000 U	7110	71	33-132	
2-Chlorotoluene	10000	1000 U	8950	90	69-117	
4-Chlorotoluene	10000	1000 U	9000	90	71-116	
cis-1,2-Dichloroethene	10000	1000 U	9200	92	70-120	
cis-1,3-Dichloropropene	10000	1000 U	7290	73	51-110	
Dibromochloromethane	10000	1000 U	8040	80	56-118	
1,2-Dibromo-3-Chloropropane	10000	5000 U	8150	82	32-139	
1,2-Dibromoethane	10000	1000 U	9020	90	74-113	
Dibromomethane	10000	1000 U	9340	93	77-121	
1,2-Dichlorobenzene	10000	1000 U	9090	91	75-111	
1,3-Dichlorobenzene	10000	1000 U	8940	89	73-110	
1,4-Dichlorobenzene	10000	1000 U	8700	87	75-110	
Dichlorodifluoromethane	10000	1000 U	4600	46	17-128	
1,1-Dichloroethane	10000	1000 U	9430	94	79-116	
1,2-Dichloroethane	10000	1000 U	10200	102	68-129	
1,1-Dichloroethene	10000	1000 U	8940	89	74-135	
1,2-Dichloropropane	10000	1000 U	9350	94	78-115	
1,3-Dichloropropane	10000	1000 U	9360	94	74-118	
2,2-Dichloropropane	10000	1000 U	7650	77	38-127	
1,1-Dichloropropene	10000	1000 U	9210	92	80-114	
Diisopropyl ether	10000	5000 U	8730	87	73-118	
Ethylbenzene	10000	1000 U	9600	96	75-116	
Hexachlorobutadiene	10000	1000 U	7570	76	27-132	
2-Hexanone	20000	5000 U	19900	99	47-139	
Isopropylbenzene	10000	1000 U	9560	96	68-116	
Methylene Chloride	10000	1000 U	9220	92	63-128	
4-Methyl-2-pentanone	20000	5000 U	19800	99	56-131	
Methyl tert-butyl ether	10000	1000 U	8580	86	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0916.D

Lab ID: 240-23065-A-4 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20000	2000 U	19800	99	75-117	
Naphthalene	10000	1000 U	7050	71	15-158	
n-Butylbenzene	10000	1000 U	9490	95	56-127	
n-Propylbenzene	10000	1000 U	9270	93	64-124	
o-Xylene	10000	1000 U	9760	98	76-116	
p-Isopropyltoluene	10000	1000 U	9720	97	64-122	
sec-Butylbenzene	10000	1000 U	9290	93	60-119	
Styrene	10000	1000 U	9040	90	71-117	
tert-Butyl alcohol	200000	20000 U	168000	84	70-130	
tert-Butylbenzene	10000	1000 U	9430	94	61-119	
1,1,1,2-Tetrachloroethane	10000	1000 U	9110	91	64-118	
1,1,2,2-Tetrachloroethane	10000	1000 U	8880	89	63-122	
Tetrachloroethene	10000	1000 U	8760	88	70-117	
Toluene	10000	240 J	9660	94	78-114	
trans-1,2-Dichloroethene	10000	1000 U	9120	91	80-119	
trans-1,3-Dichloropropene	10000	1000 U	7780	78	46-116	
1,2,3-Trichlorobenzene	10000	1000 U	7670	77	45-129	
1,2,4-Trichlorobenzene	10000	1000 U	7490	75	38-138	
1,1,1-Trichloroethane	10000	1000 U	8670	87	68-121	
Trichloroethene	10000	1000 U	8650	86	66-120	
Trichlorofluoromethane	10000	1000 U	7000	70	46-157	
1,2,3-Trichloropropane	10000	1000 U	8580	86	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10000	1000 U	9210	92	70-152	
1,2,3-Trimethylbenzene	10000	5000 U	9360	94	70-130	
1,2,4-Trimethylbenzene	10000	1000 U	9410	94	67-124	
Vinyl acetate	10000	2000 U	7230	72	43-157	
Vinyl chloride	10000	1000 U	7110	71	49-130	
Xylenes, Total	30000	2000 U	29600	99	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0917.D

Lab ID: 240-23065-A-4 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	20000	18200	91	1	30	33-145	
Benzene	10000	35600	114	4	30	72-121	
Bromobenzene	10000	8250	82	4	30	71-116	
Bromochloromethane	10000	9080	91	3	30	73-121	
Bromodichloromethane	10000	9680	97	5	30	67-120	
Bromoform	10000	7270	73	8	30	32-128	
Bromomethane	10000	7450	75	22	30	10-186	
2-Butanone	20000	18400	92	2	30	54-129	
Carbon disulfide	10000	11900	119	13	30	57-147	
Carbon tetrachloride	10000	9510	95	11	30	59-129	
Chlorobenzene	10000	14500	94	1	30	80-110	
Chloroethane	10000	8810	88	21	30	21-165	
2-Chloroethyl vinyl ether	10000	7640 J	76	1	30	10-150	
Chloroform	10000	10100	101	9	30	76-118	
Chloromethane	10000	8390	84	17	30	33-132	
2-Chlorotoluene	10000	8200	82	9	30	69-117	
4-Chlorotoluene	10000	8620	86	4	30	71-116	
cis-1,2-Dichloroethene	10000	9650	96	5	30	70-120	
cis-1,3-Dichloropropene	10000	7850	78	7	30	51-110	
Dibromochloromethane	10000	7810	78	3	30	56-118	
1,2-Dibromo-3-Chloropropane	10000	8890	89	9	30	32-139	
1,2-Dibromoethane	10000	9650	96	7	30	74-113	
Dibromomethane	10000	9870	99	6	30	77-121	
1,2-Dichlorobenzene	10000	9070	91	0	30	75-111	
1,3-Dichlorobenzene	10000	8710	87	3	30	73-110	
1,4-Dichlorobenzene	10000	8490	85	2	30	75-110	
Dichlorodifluoromethane	10000	5590	56	19	30	17-128	
1,1-Dichloroethane	10000	10500	105	11	30	79-116	
1,2-Dichloroethane	10000	10200	102	0	30	68-129	
1,1-Dichloroethene	10000	10200	102	13	30	74-135	
1,2-Dichloropropane	10000	9480	95	1	30	78-115	
1,3-Dichloropropane	10000	8640	86	8	30	74-118	
2,2-Dichloropropane	10000	8500	85	11	30	38-127	
1,1-Dichloropropene	10000	9170	92	0	30	80-114	
Diisopropyl ether	10000	9170	92	5	30	73-118	
Ethylbenzene	10000	9470	95	1	30	75-116	
Hexachlorobutadiene	10000	7530	75	0	30	27-132	
2-Hexanone	20000	20600	103	4	30	47-139	
Isopropylbenzene	10000	10100	101	5	30	68-116	
Methylene Chloride	10000	10000	100	9	30	63-128	
4-Methyl-2-pentanone	20000	21200	106	7	30	56-131	
Methyl tert-butyl ether	10000	9500	95	10	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC0917.D

Lab ID: 240-23065-A-4 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	20000	19800	99	0	30	75-117	
Naphthalene	10000	7350	74	4	30	15-158	
n-Butylbenzene	10000	9590	96	1	30	56-127	
n-Propylbenzene	10000	8870	89	4	30	64-124	
o-Xylene	10000	9880	99	1	30	76-116	
p-Isopropyltoluene	10000	9510	95	2	30	64-122	
sec-Butylbenzene	10000	9180	92	1	30	60-119	
Styrene	10000	9100	91	1	30	71-117	
tert-Butyl alcohol	200000	202000	101	18	30	70-130	
tert-Butylbenzene	10000	8840	88	6	30	61-119	
1,1,1,2-Tetrachloroethane	10000	9740	97	7	30	64-118	
1,1,2,2-Tetrachloroethane	10000	8560	86	4	30	63-122	
Tetrachloroethene	10000	8860	89	1	30	70-117	
Toluene	10000	9240	90	4	30	78-114	
trans-1,2-Dichloroethene	10000	9850	99	8	30	80-119	
trans-1,3-Dichloropropene	10000	7420	74	5	30	46-116	
1,2,3-Trichlorobenzene	10000	8150	82	6	30	45-129	
1,2,4-Trichlorobenzene	10000	8040	80	7	30	38-138	
1,1,1-Trichloroethane	10000	9570	96	10	30	68-121	
Trichloroethene	10000	8890	89	3	30	66-120	
Trichlorofluoromethane	10000	8190	82	16	30	46-157	
1,2,3-Trichloropropane	10000	8120	81	5	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10000	10700	107	15	30	70-152	
1,2,3-Trimethylbenzene	10000	9280	93	1	30	70-130	
1,2,4-Trimethylbenzene	10000	9420	94	0	30	67-124	
Vinyl acetate	10000	7800	78	8	30	43-157	
Vinyl chloride	10000	8380	84	16	30	49-130	
Xylenes, Total	30000	29700	99	0	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-041013	240-23078-1	88	101	91	85
MRC-MW-02A-041013	240-23078-2	92	105	90	86
	MB 240-82310/5	89	96	89	82
	LCS 240-82310/4	93	92	96	104
	240-23065-A-4 MS	87	93	98	96
	240-23065-A-4 MSD	92	91	93	97

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
Acrolein	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	0.0383	0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
Acetonitrile	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		0.0282				12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Lin1	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
Tetrahydrofuran	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	0.0478							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
1,4-Dioxane	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	0.0028							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Lin1	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Lin1	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.9601 0.7242	0.9050	0.8719	0.8759	0.8132	Ave		0.8584				9.5		15.0			
Ethyl ether	0.3412 0.2934	0.3226	0.3378	0.3107	0.3010	Ave		0.3178				6.1		15.0			
3-Chloro-1-propene	0.1577 0.1521	0.1355	0.1441	0.1436	0.1526	Ave		0.1476				5.4		15.0			
Diisopropyl ether	0.2710 0.3092	0.2719	0.2883	0.2894	0.3057	Ave		0.2893				5.6		15.0			
2-Chloro-1,3-butadiene	0.5134 0.5286	0.4490	0.5190	0.5156	0.5192	Ave		0.5075				5.7		15.0			
Ethyl-t-butyl ether (ETBE)	0.5996 0.6507	0.6278	0.6422	0.6520	0.6730	Ave		0.6409				3.9		15.0			
Ethyl acetate	0.1671 0.1520	0.1351	0.1372	0.1445	0.1460	Ave		0.1470				7.9		15.0			
Propionitrile	0.0279 0.0276	0.0303	0.0278	0.0267	0.0286	Ave		0.0282				4.4		15.0			
Methacrylonitrile	0.1142 0.1154	0.1292	0.1216	0.1061	0.1151	Ave		0.1169				6.7		15.0			
Isobutyl alcohol	0.0041 0.0040	0.0039	0.0038	0.0045	0.0043	Ave		0.0041				6.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4454 0.5069	0.4734	0.4860	0.4960	0.5048	Ave		0.4854				4.8		15.0			
n-Heptane	0.0775 0.0685	0.0576	0.0627	0.0688	0.0669	Ave		0.0670				10.0		15.0			
n-Butanol	0.0026 0.0025	0.0026	0.0028	0.0029	0.0027	Ave		0.0027				5.4		15.0			
Methyl methacrylate	0.1572 0.1432	0.1218	0.1256	0.1264	0.1350	Ave		0.1349				9.9		15.0			
2-Nitropropane	0.0187 0.0239	0.0191	0.0171	0.0186	0.0192	Ave		0.0194				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23078-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0812 0.0946	0.0685	0.0862	0.0895	0.0990	Ave		0.0865				12.0		15.0			
1,2,3-Trimethylbenzene	2.5686 3.4874	2.5916	3.0529	3.0965	3.4820	Ave		3.0465				13.0		15.0			
2-Methylnaphthalene	0.2129 0.6051	0.2387	0.2880	0.4178	0.5799	Qua	-1.627	0.5468	0.0010						0.9970		0.9900
n-Butyl acetate	0.1485 0.2372	0.1744	0.1786	0.2091	0.2206	Lin1	-0.239	0.2320							0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab File ID: BFB112.D BFB Injection Date: 04/17/2013

Instrument ID: A3UX15 BFB Injection Time: 09:55

Analysis Batch No.: 82310

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.0	
75	30.0 - 60.0 % of mass 95	51.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.5	(0.5)1
174	50.0 - 120.00 % of mass 95	89.0	
175	5.0 - 9.0 % of mass 174	6.7	(7.6)1
176	95.0 - 101.0 % of mass 174	88.0	(98.9)1
177	5.0 - 9.0 % of mass 176	6.1	(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-82310/2	UXC0892.D	04/17/2013	10:32
	CCV 240-82310/3	UXC0893.D	04/17/2013	10:54
	LCS 240-82310/4	UXC0894.D	04/17/2013	11:17
	MB 240-82310/5	UXC0895.D	04/17/2013	11:40
TB-041013	240-23078-1	UXC0911.D	04/17/2013	17:41
MRC-MW-02A-041013	240-23078-2	UXC0912.D	04/17/2013	18:03
	240-23065-A-4 MS	UXC0916.D	04/17/2013	19:32
	240-23065-A-4 MSD	UXC0917.D	04/17/2013	19:54

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCVIS 240-82310/2 Calibration Date: 04/17/2013 10:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0892.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.4256		1.00	0.0100	8.9	50.0
Chloromethane	Ave	0.5133	0.5653	0.1000	1.00	0.0100	10.1	50.0
Vinyl chloride	Ave	0.5765	0.6004		1.00	0.0100	4.1	20.0
Bromomethane	Ave	0.3951	0.4161		1.00	0.0100	5.3	50.0
Chloroethane	Ave	0.3438	0.3785		1.00	0.0100	10.1	50.0
Trichlorofluoromethane	Ave	0.5693	0.5092		1.00	0.0100	-10.6	50.0
Acrolein	Qua		0.0396 X		20.0	0.100	4.1	50.0
1,1-Dichloroethene	Ave	0.3445	0.3302		1.00	0.0100	-4.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.2470		1.00	0.0100	-6.1	50.0
Acetone	Qua		0.0710		10.0	0.0200	-5.8	50.0
Iodomethane	Ave	0.4958	0.5481		1.00	0.0100	10.5	50.0
Carbon disulfide	Ave	0.7463	0.8886		1.00	0.0100	19.1	50.0
Acetonitrile	Ave	0.0282	0.0302 Y		20.0	0.100	7.0	50.0
Methyl acetate	Ave	0.1586	0.1487		10.0	0.0200	-6.2	50.0
Methylene Chloride	Lin1		0.4414		1.00	0.0100	15.9	50.0
tert-Butyl alcohol	Ave	0.0097	0.0096		50.0	0.200	-0.3	50.0
Acrylonitrile	Ave	0.0871	0.0848		20.0	0.0200	-2.7	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3520		1.00	0.0100	-1.3	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6109		1.00	0.0100	-3.2	50.0
Hexane	Ave	0.0668	0.0613		1.00	0.0100	-8.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.5662	0.1000	1.00	0.0100	-1.5	50.0
Vinyl acetate	Ave	0.0383	0.0333		2.00	0.0100	-13.0	50.0
2,2-Dichloropropane	Ave	0.2770	0.2607		1.00	0.0100	-5.9	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.3522		1.00	0.0100	-6.6	50.0
2-Butanone	Ave	0.0910	0.0811		10.0	0.0200	-10.9	50.0
Bromochloromethane	Ave	0.1662	0.1616		1.00	0.0100	-2.8	50.0
Tetrahydrofuran	Lin1		0.0497 Y		5.00	0.0100	-0.8	50.0
Chloroform	Ave	0.5671	0.5574		1.00	0.0100	-1.7	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.3941		1.00	0.0100	-4.3	50.0
Cyclohexane	Ave	0.5423	0.5058		1.00	0.0100	-6.7	50.0
1,1-Dichloropropene	Ave	0.4381	0.4101		1.00	0.0100	-6.4	50.0
Carbon tetrachloride	Ave	0.3243	0.2992		1.00	0.0100	-7.8	50.0
Benzene	Ave	1.387	1.291		1.00	0.0100	-6.9	50.0
1,2-Dichloroethane	Ave	0.4040	0.3651		1.00	0.0100	-9.6	50.0
Trichloroethene	Ave	0.3397	0.3040		1.00	0.0100	-10.5	50.0
Methylcyclohexane	Ave	0.5006	0.4572		1.00	0.0100	-8.7	50.0
1,2-Dichloropropane	Ave	0.3010	0.2749		1.00	0.0100	-8.7	20.0
Dibromomethane	Ave	0.1618	0.1473		1.00	0.0100	-8.9	50.0
1,4-Dioxane	Lin1		0.0021 Y		50.0	0.500	-20.6	50.0
Bromodichloromethane	Ave	0.3013	0.2879		1.00	0.0100	-4.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCVIS 240-82310/2 Calibration Date: 04/17/2013 10:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0892.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1038		10.0	0.0200	-13.0	50.0
cis-1,3-Dichloropropene	Lin1		0.2820		1.00	0.0100	-21.0	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1611		10.0	0.0200	5.2	50.0
Toluene	Ave	2.028	1.935		1.00	0.0100	-4.6	20.0
trans-1,3-Dichloropropene	Lin1		0.3155		1.00	0.0100	-22.7	50.0
Ethyl methacrylate	Lin1		0.3374		1.00	0.0100	-10.9	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.2891		1.00	0.0100	-10.5	50.0
Tetrachloroethene	Ave	0.3905	0.3494		1.00	0.0100	-10.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5312		1.00	0.0100	-9.9	50.0
2-Hexanone	Ave	0.1436	0.1637		10.0	0.0200	14.0	50.0
Dibromochloromethane	Lin1		0.2554		1.00	0.0100	-17.4	50.0
1,2-Dibromoethane	Ave	0.3048	0.2816		1.00	0.0100	-7.6	50.0
Chlorobenzene	Ave	1.276	1.198	0.3000	1.00	0.0100	-6.1	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3664		1.00	0.0100	3.7	50.0
Ethylbenzene	Ave	0.6700	0.6428		1.00	0.0100	-4.1	20.0
m-Xylene & p-Xylene	Ave	1.626	1.688		2.00	0.0200	3.8	50.0
o-Xylene	Ave	0.8173	0.8765		1.00	0.0100	7.2	50.0
Styrene	Lin1		1.364		1.00	0.0100	-6.0	50.0
Bromoform	Lin1		0.1348	0.1000	1.00	0.0100	-13.5	50.0
Isopropylbenzene	Ave	1.984	2.029		1.00	0.0100	2.3	50.0
Bromobenzene	Ave	0.9263	0.7666		1.00	0.0100	-17.2	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.5829	0.3000	1.00	0.0100	-15.6	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1739		1.00	0.0100	-21.1	50.0
trans-1,4-Dichloro-2-butene	Qua		0.1058		1.00	0.0100	30.9 X	50.0
n-Propylbenzene	Ave	0.9249	0.8247		1.00	0.0100	-10.8	50.0
2-Chlorotoluene	Ave	0.8847	0.7645		1.00	0.0100	-13.6	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.540		1.00	0.0100	-7.0	50.0
4-Chlorotoluene	Ave	2.918	2.551		1.00	0.0100	-12.6	50.0
tert-Butylbenzene	Ave	2.268	2.048		1.00	0.0100	-9.7	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.620		1.00	0.0100	-8.2	50.0
sec-Butylbenzene	Ave	3.298	3.005		1.00	0.0100	-8.9	50.0
1,3-Dichlorobenzene	Ave	1.741	1.576		1.00	0.0100	-9.5	50.0
p-Isopropyltoluene	Ave	2.821	2.598		1.00	0.0100	-7.9	50.0
1,4-Dichlorobenzene	Ave	1.894	1.623		1.00	0.0100	-14.3	50.0
1,2-Dichlorobenzene	Ave	1.674	1.476		1.00	0.0100	-11.9	50.0
n-Butylbenzene	Ave	2.489	2.310		1.00	0.0100	-7.2	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0583		2.00	0.0100	-14.9	50.0
1,3,5-Trichlorobenzene	Ave	1.071	0.9290		1.00	0.0100	-13.2	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.6078		1.00	0.0100	-19.5	50.0
Hexachlorobutadiene	Ave	0.5612	0.4088		1.00	0.0100	-27.2	50.0
Naphthalene	Lin1		1.072		1.00	0.0100	-29.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCVIS 240-82310/2 Calibration Date: 04/17/2013 10:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0892.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.4943		1.00	0.0100	-24.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2800		0.00855	0.00890	-3.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2919		0.00831	0.00890	-6.7	50.0
Toluene-d8 (Surr)	Ave	1.667	1.581		0.00844	0.00890	-5.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5401		0.00927	0.00890	4.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCV 240-82310/3 Calibration Date: 04/17/2013 10:54

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0893.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.9170		2.00	0.0100	6.8	50.0
Ethyl ether	Ave	0.3178	0.3117		2.00	0.0100	-1.9	50.0
3-Chloro-1-propene	Ave	0.1476	0.1547		2.00	0.0100	4.8	50.0
Diisopropyl ether	Ave	0.2893	0.3023		10.0	0.0500	4.5	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.5155		2.00	0.0100	1.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6635		5.00	0.0100	3.5	50.0
Ethyl acetate	Ave	0.1470	0.1340		4.00	0.0200	-8.8	50.0
Propionitrile	Ave	0.0282	0.0287		4.00	0.0200	2.1	50.0
Methacrylonitrile	Ave	0.1169	0.1147		2.00	0.0100	-1.9	50.0
Isobutyl alcohol	Ave	0.0041	0.0041		50.0	0.200	-0.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.4975		5.00	0.0100	2.5	50.0
n-Heptane	Ave	0.0670	0.0663		1.00	0.0100	-1.0	50.0
n-Butanol	Ave	0.0027	0.0025		50.0	0.200	-7.8	50.0
Methyl methacrylate	Ave	0.1349	0.1213		2.00	0.0100	-10.0	50.0
2-Nitropropane	Ave	0.0194	0.0185		2.00	0.0200	-5.0	50.0
Cyclohexanone	Ave	0.0865	0.0312		20.0	0.100	-63.9*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.268		0.0107	0.0100	7.3	50.0
2-Methylnaphthalene	Qua		0.1754		5.00	0.0200	-53.8*	50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-82310/2		1635815	4.66	1093329	7.30	752958	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23078-1

SDG No.:

Sample No.: CCVIS 240-82310/2 Date Analyzed: 04/17/2013 10:32

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0892.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1635815	4.66	1093329	7.30	752958	9.51
UPPER LIMIT		3271630	5.16	2186658	7.80	1505916	10.01
LOWER LIMIT		817908	4.16	546665	6.80	376479	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-82310/3		1571408	4.66	1059396	7.30	553770	9.51
LCS 240-82310/4		1741767	4.66	1154950	7.30	742109	9.51
MB 240-82310/5		1679041	4.66	1165884	7.30	527382	9.51
240-23078-1	TB-041013	1566895	4.66	1060420	7.30	500223	9.51
240-23078-2	MRC-MW-02A-041013	1542760	4.66	1046837	7.30	481507	9.51
240-23065-A-4 MS		1809764	4.66	1167447	7.30	708199	9.51
240-23065-A-4 MSD		1619265	4.66	1095400	7.30	721523	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Batch Number: 14482 Batch Start Date: 04/16/13 17:03 Batch Analyst: Arauz, Horacio

Batch Method: Filtration Batch End Date: 04/16/13 17:35

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00021	LC6850SP 00010		
MB 320-14482/1		Filtration, 6850		4.00 mL	4.00 mL	40 uL			
LCS 320-14482/2		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
INF 320-14482/3		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
240-22881-D-3 MS		Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		
240-22881-D-3 MSD		Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		
240-23078-A-3	MRC-MW-01A-041013	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			

Batch Notes	
Batch Comment	BA/AG/H Dionex 121227; Spiked:HA Witnessed: JR
Filter Lot #	.45um Millipore R2SA72748; .20um Millex R2AA50532; H2O 4-15-13 SMCS 4515-019B

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab File ID: 17APR13-Perc-080.d Lab Sample ID: MB 320-14482/1-A

Matrix: Water Date Extracted: 04/16/2013 17:03

Instrument ID: A5 Date Analyzed: 04/18/2013 08:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-14482/2-A	17APR13-Perc-081.d	04/18/2013 08:44
	240-22881-D-3-B MS	17APR13-Perc-085.d	04/18/2013 09:50
	240-22881-D-3-C MSD	17APR13-Perc-086.d	04/18/2013 10:06
MRC-MW-01A-041013	240-23078-3	17APR13-Perc-092.d	04/18/2013 11:45

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-14482/1-A

Matrix: Water Lab File ID: 17APR13-Perc-080.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 04/16/2013 17:03

Sample wt/vol: 4.00(mL) Date Analyzed: 04/18/2013 08:27

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-081.d

Lab ID: LCS 320-14482/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	4.95	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-085.d

Lab ID: 240-22881-D-3-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	2.1	7.07	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-086.d

Lab ID: 240-22881-D-3-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	7.22	103	2	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 17APR13-Perc-082.d

Lab ID: INF 320-14482/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.94	99	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Instrument ID: A5 Start Date: 04/17/2013 11:36

Analysis Batch Number: 14484 End Date: 04/18/2013 14:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/17/2013 11:36	1		Anion HR 4.6(mm)
ICB 320-14484/2		04/17/2013 11:53	1	17APR13-Perc-005.d	Anion HR 4.6(mm)
STD01 320-14484/3 IC		04/17/2013 12:09	1	17APR13-Perc-006.d	Anion HR 4.6(mm)
STD02 320-14484/4 IC		04/17/2013 12:26	1	17APR13-Perc-007.d	Anion HR 4.6(mm)
STD03 320-14484/5 IC		04/17/2013 12:42	1	17APR13-Perc-008.d	Anion HR 4.6(mm)
STD04 320-14484/6 ICISAV		04/17/2013 12:59	1	17APR13-Perc-009.d	Anion HR 4.6(mm)
STD05 320-14484/7 IC		04/17/2013 13:15	1	17APR13-Perc-010.d	Anion HR 4.6(mm)
STD06 320-14484/8 IC		04/17/2013 13:32	1	17APR13-Perc-011.d	Anion HR 4.6(mm)
STD07 320-14484/9 IC		04/17/2013 13:48	1	17APR13-Perc-012.d	Anion HR 4.6(mm)
STD08 320-14484/10 IC		04/17/2013 14:04	1	17APR13-Perc-013.d	Anion HR 4.6(mm)
CCB 320-14484/11		04/17/2013 14:21	1	17APR13-Perc-014.d	Anion HR 4.6(mm)
ICV 320-14484/12		04/17/2013 14:37	1	17APR13-Perc-015.d	Anion HR 4.6(mm)
CCB 320-14484/71		04/18/2013 06:49	1		Anion HR 4.6(mm)
CCVL 320-14484/72		04/18/2013 07:05	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 07:21	1		Anion HR 4.6(mm)
CCVL 320-14484/74		04/18/2013 07:38	1	17APR13-Perc-077.d	Anion HR 4.6(mm)
CCV 320-14484/75		04/18/2013 07:54	1	17APR13-Perc-078.d	Anion HR 4.6(mm)
CCB 320-14484/76		04/18/2013 08:11	1	17APR13-Perc-079.d	Anion HR 4.6(mm)
MB 320-14482/1-A		04/18/2013 08:27	1	17APR13-Perc-080.d	Anion HR 4.6(mm)
LCS 320-14482/2-A		04/18/2013 08:44	1	17APR13-Perc-081.d	Anion HR 4.6(mm)
INF 320-14482/3-A		04/18/2013 09:00	1	17APR13-Perc-082.d	Anion HR 4.6(mm)
ZZZZZ		04/18/2013 09:17	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 09:33	1		Anion HR 4.6(mm)
240-22881-D-3-B MS		04/18/2013 09:50	1	17APR13-Perc-085.d	Anion HR 4.6(mm)
240-22881-D-3-C MSD		04/18/2013 10:06	1	17APR13-Perc-086.d	Anion HR 4.6(mm)
ZZZZZ		04/18/2013 10:23	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 10:39	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 10:56	1		Anion HR 4.6(mm)
CCV 320-14484/87		04/18/2013 11:12	1	17APR13-Perc-090.d	Anion HR 4.6(mm)
ZZZZZ		04/18/2013 11:29	1		Anion HR 4.6(mm)
240-23078-3	MRC-MW-01A-041013	04/18/2013 11:45	1	17APR13-Perc-092.d	Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:01	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:18	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:34	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 12:51	1		Anion HR 4.6(mm)
ZZZZZ		04/18/2013 13:07	1		Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Instrument ID: A5 Start Date: 04/17/2013 11:36

Analysis Batch Number: 14484 End Date: 04/18/2013 14:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/18/2013 13:24	1		Anion HR 4.6(mm)
CCVL 320-14484/96		04/18/2013 13:40	1	17APR13-Perc-099.d	Anion HR 4.6(mm)
CCV 320-14484/97		04/18/2013 13:57	1	17APR13-Perc-100.d	Anion HR 4.6(mm)
CCB 320-14484/98		04/18/2013 14:13	1	17APR13-Perc-101.d	Anion HR 4.6(mm)

6850

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1 Analy Batch No.: 14484

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/17/2013 12:09 Calibration End Date: 04/17/2013 14:04 Calibration ID: 2659

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-14484/3	17APR13-Perc-006.d
Level 2	STD02 320-14484/4	17APR13-Perc-007.d
Level 3	STD03 320-14484/5	17APR13-Perc-008.d
Level 4	STD04 320-14484/6	17APR13-Perc-009.d
Level 5	STD05 320-14484/7	17APR13-Perc-010.d
Level 6	STD06 320-14484/8	17APR13-Perc-011.d
Level 7	STD07 320-14484/9	17APR13-Perc-012.d
Level 8	STD08 320-14484/10	17APR13-Perc-013.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7384 0.7621	0.8746 0.7868	0.8005 0.8262	0.7989	0.7580	Ave		0.7932				5.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab Sample ID: ICV 320-14484/12 Calibration Date: 04/17/2013 14:37

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-015.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.8216		5.18	5.00	3.6	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCVL 320-14484/74 Calibration Date: 04/18/2013 07:38

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-077.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7435		0.469	0.500	-6.3	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCV 320-14484/75 Calibration Date: 04/18/2013 07:54

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-078.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7718		0.973	1.00	-2.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCV 320-14484/87 Calibration Date: 04/18/2013 11:12

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-090.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7664		1.93	2.00	-3.4	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCVL 320-14484/96 Calibration Date: 04/18/2013 13:40

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-099.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.8189		0.516	0.500	3.2	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Lab Sample ID: CCV 320-14484/97 Calibration Date: 04/18/2013 13:57

Instrument ID: A5 Calib Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 04/17/2013 14:04

Lab File ID: 17APR13-Perc-100.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7932	0.7837		4.94	5.00	-1.2	15.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-14484/2

Matrix: Water Lab File ID: 17APR13-Perc-005.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/17/2013 11:53

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-14484/11

Matrix: Water Lab File ID: 17APR13-Perc-014.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/17/2013 14:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-14484/76

Matrix: Water Lab File ID: 17APR13-Perc-079.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/18/2013 08:11

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-14484/98

Matrix: Water Lab File ID: 17APR13-Perc-101.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 04/18/2013 14:13

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 75(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 14484 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-23078-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 04/17/2013 12:09

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 04/17/2013 14:04

Calibration ID: 2659

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		148228842	9.82				
UPPER LIMIT		222343263	10.82				
LOWER LIMIT		74114421	8.82				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-14484/11		160564406	9.83				
ICV 320-14484/12		142989114	9.82				
CCVL 320-14484/74		152935824	9.83				
CCV 320-14484/75		158187279	9.83				
CCB 320-14484/76		163443936	9.85				
MB 320-14482/1-A		156345569	9.85				
LCS 320-14482/2-A		146362285	9.85				
INF 320-14482/3-A		143777835	9.79				
240-22881-D-3-B MS		135715351	9.83				
240-22881-D-3-C MSD		141474831	9.85				
CCV 320-14484/87		145009018	9.86				
240-23078-3	MRC-MW-01A-041013	146080249	9.85				
CCVL 320-14484/96		119544372	9.86				
CCV 320-14484/97		147495319	9.86				
CCB 320-14484/98		161734352	9.89				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23078-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Beryllium	9	1	0.1

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23078-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Beryllium	9	0.5	0.1

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23078-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23078-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23078-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23078-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23078-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Beryllium		4000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23078-1

SDG No.:

Instrument ID: ICPMS5 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100728/1-A	04/29/2013 10:05	100728		20	20
LCS 440-100728/2-A	04/29/2013 10:05	100728		20	20
240-23078-4	04/29/2013 10:05	100728		20	20
240-23078-4 DU	04/29/2013 10:05	100728		20	20
240-23078-4 MS	04/29/2013 10:05	100728		20	20
240-23078-2	04/29/2013 10:05	100728		20	20
240-23078-3	04/29/2013 10:05	100728		20	20
240-23078-4 MSD	04/29/2013 10:05	100728		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100728/1-A

Instrument Code: CV-HG2 Batch No.: 101127

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW-05A-041013 MS
Lab ID: 240-23078-4 MS
Lab Name: TestAmerica Irvine
Job No.: 240-23078-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	6.99		0.20	U	8.00	87	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MRC-MW-05A-041013 MSD
Lab ID: 240-23078-4 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-23078-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.03		8.00	88	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: MRC-MW-05A-041013 DU Lab ID: 240-23078-4 DU

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-100728/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.01		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-99721/1-A	04/22/2013 13:39	99721		50	50
LCS 440-99721/2-A	04/22/2013 13:39	99721		50	50
240-23078-4	04/22/2013 13:39	99721		50	50
240-23078-4 MS	04/22/2013 13:39	99721		50	50
240-23078-4 MSD	04/22/2013 13:39	99721		50	50
240-23078-2	04/22/2013 13:39	99721		50	50
240-23078-3	04/22/2013 13:39	99721		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99721/1-A

Instrument Code: ICPMS5 Batch No.: 99928

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	0.334	J		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-99721/1-A

Instrument Code: ICPMS4 Batch No.: 100261

CAS No.	Analyte	Concentration	C	Q	Method
7440-41-7	Beryllium	1.0	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-05A-041013 MS
Lab ID: 240-23078-4 MS
Lab Name: TestAmerica Irvine
Job No.: 240-23078-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.5		2.0	U	80.0	103	75-125		6020
Arsenic	79.7		1.0	J	80.0	98	75-125		6020
Beryllium	94.7		13		80.0	103	75-125		6020
Cadmium	77.9		0.69	J	80.0	97	75-125		6020
Barium	377		290		80.0	104	75-125		6020
Chromium	78.5		2.0	U	80.0	98	75-125		6020
Copper	86.9		12		80.0	94	75-125		6020
Nickel	400		330		80.0	88	75-125	4	6020
Lead	74.7		1.1		80.0	92	75-125		6020
Selenium	77.3		5.0	U	80.0	97	75-125		6020
Cobalt	293		220		80.0	91	75-125		6020
Silver	76.6		0.10	J	80.0	96	75-125		6020
Thallium	77.0		0.23	J	80.0	96	75-125		6020
Zinc	565		500		80.0	80	75-125	4	6020
Molybdenum	79.5		0.38	J	80.0	99	75-125		6020
Vanadium	79.9		1.1	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-05A-041013 MSD
Lab ID: 240-23078-4 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-23078-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	83.6		80.0	104	75-125	1	20		6020
Arsenic	80.9		80.0	100	75-125	1	20		6020
Beryllium	94.5		80.0	102	75-125	0	20		6020
Cadmium	78.5		80.0	97	75-125	1	20		6020
Barium	379		80.0	105	75-125	0	20		6020
Chromium	79.7		80.0	100	75-125	1	20		6020
Copper	86.1		80.0	93	75-125	1	20		6020
Nickel	396		80.0	83	75-125	1	20	4	6020
Lead	75.4		80.0	93	75-125	1	20		6020
Selenium	78.2		80.0	98	75-125	1	20		6020
Cobalt	292		80.0	90	75-125	0	20		6020
Silver	78.1		80.0	97	75-125	2	20		6020
Thallium	77.7		80.0	97	75-125	1	20		6020
Zinc	564		80.0	78	75-125	0	20	4	6020
Molybdenum	81.5		80.0	101	75-125	3	20		6020
Vanadium	80.3		80.0	99	75-125	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-05A-041013 PDS Lab ID: 240-23078-4 PDS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.8		2.0	U	80.0	103	75-125		6020
Arsenic	80.8		1.0	J	80.0	100	75-125		6020
Beryllium	94.7		13		80.0	103	75-125		6020
Cadmium	76.8		0.69	J	80.0	95	75-125		6020
Barium	373		290		80.0	98	75-125		6020
Chromium	78.7		2.0	U	80.0	98	75-125		6020
Copper	85.9		12		80.0	93	75-125		6020
Nickel	392		330		80.0	79	75-125		6020
Lead	74.8		1.1		80.0	92	75-125		6020
Selenium	77.2		5.0	U	80.0	97	75-125		6020
Cobalt	290		220		80.0	88	75-125		6020
Silver	75.1		0.10	J	80.0	94	75-125		6020
Thallium	76.4		0.23	J	80.0	95	75-125		6020
Zinc	559		500		80.0	72	75-125	W	6020
Molybdenum	81.3		0.38	J	80.0	101	75-125		6020
Vanadium	80.5		1.1	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-99721/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	84.6		106	80	120		6020
Arsenic	80.0	80.2		100	80	120		6020
Cadmium	80.0	81.2		101	80	120		6020
Barium	80.0	81.1		101	80	120		6020
Chromium	80.0	82.9		104	80	120		6020
Copper	80.0	84.3		105	80	120		6020
Nickel	80.0	82.2		103	80	120		6020
Lead	80.0	80.7		101	80	120		6020
Selenium	80.0	84.0		105	80	120		6020
Cobalt	80.0	84.5		106	80	120		6020
Silver	80.0	80.0		100	80	120		6020
Thallium	80.0	83.2		104	80	120		6020
Zinc	80.0	73.9		92	80	120		6020
Molybdenum	80.0	78.5		98	80	120		6020
Vanadium	80.0	81.1		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-99721/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Beryllium	80.0	83.6		104	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23078-3

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23078-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.40	J	10	U	NC		6020
Arsenic	1.1	J	25	U	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	38		39.0		1.5		6020
Chromium	2.0	U	10	U	NC		6020
Copper	8.2		8.54	J	NC		6020
Nickel	4.2		10	U	NC		6020
Lead	0.52	J	5.0	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	0.72	J	0.750	J	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	5.3	J	100	U	NC		6020
Molybdenum	0.48	J	50	U	NC		6020
Vanadium	3.1	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/29/2013 12:59 End Date: 04/29/2013 14:22

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-101025/6-A	1		12:59	X
IC 440-101025/7-A	1		13:02	X
IC 440-101025/8-A	1		13:04	X
IC 440-101025/9-A	1		13:06	X
IC 440-101025/10-A	1		13:09	X
IC 440-101025/11-A	1		13:11	X
ICV 440-101025/1-A	1		13:14	X
ICB 440-101025/2-A	1		13:16	X
CRA 440-101025/5-A	1		13:19	X
MB 440-100728/1-A	1	T	13:21	X
LCS 440-100728/2-A	1	T	13:24	X
240-23078-4	1	T	13:26	X
240-23078-4 DU	1	T	13:29	X
240-23078-4 MS	1	T	13:31	X
240-23078-4 MSD	1	T	13:34	X
240-23078-2	1	T	13:36	X
240-23078-3	1	T	13:39	X
ZZZZZZ			13:41	
CCV 440-101025/3-A	1		13:43	X
CCB 440-101025/4-A	1		13:46	X
ZZZZZZ			13:48	
ZZZZZZ			13:51	
ZZZZZZ			13:56	
ZZZZZZ			14:02	
ZZZZZZ			14:04	
ZZZZZZ			14:07	
ZZZZZZ			14:09	
ZZZZZZ			14:12	
ZZZZZZ			14:14	
ZZZZZZ			14:17	
CCV 440-101025/3-A			14:19	
CCB 440-101025/4-A			14:22	

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	ICV 440-101025/1-A 04/29/2013 13:14				CCV 440-101025/3-A 04/29/2013 13:43							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.90		8.00	99	4.08		4.00	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-101025/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.242		121	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101025/2-A 04/29/2013 13:16		CCB 440-101025/4-A 04/29/2013 13:46					
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U				

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 04/23/2013 08:59 End Date: 04/23/2013 11:39

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ag	As	Ba	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn																
STD0 440-99928/1 IC	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
STD1 440-99928/2 IC	1		09:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
STD2 440-99928/3 IC	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
STD3 440-99928/4 IC	1		09:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
STD4 440-99928/5 IC	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
ICV 440-99928/6	1		09:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
ICB 440-99928/7	1		09:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CRI 440-99928/8	1		09:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
CRI 440-99928/9	1		09:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
ZZZZZZ			09:20																														
ICSAB 440-99928/11	1		09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
ICSA 440-99928/12	1		09:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
RINSE 440-99928/13			09:48																														
CCV 440-99928/14	1		11:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CCB 440-99928/15	1		11:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
MB 440-99721/1-A	1	R	11:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
LCS 440-99721/2-A	1	R	11:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
240-23078-4	1	R	11:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
240-23078-4 MS	1	R	11:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
240-23078-4 MSD	1	R	11:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
240-23078-4 PDS	1	R	11:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
ZZZZZZ			11:20																														
ZZZZZZ			11:22																														
240-23078-2	1	R	11:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CCV 440-99928/25	1		11:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CCB 440-99928/26	1		11:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
240-23078-3	1	R	11:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
240-23078-3 SD	5	R	11:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CCV 440-99928/29	1		11:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CCB 440-99928/30	1		11:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICV Source: MEICPMS4 ICV_00211 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00211

Analyte	ICV 440-99928/6 04/23/2013 09:10				CCV 440-99928/14 04/23/2013 11:02				CCV 440-99928/25 04/23/2013 11:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	23.6		25.0	94	51.6		50.0	103	51.1		50.0	102
Arsenic	25.6		25.0	102	49.9		50.0	100	50.5		50.0	101
Barium	26.0		25.0	104	50.8		50.0	102	50.6		50.0	101
Cadmium	25.4		25.0	102	50.5		50.0	101	50.5		50.0	101
Chromium	25.6		25.0	103	51.2		50.0	102	50.4		50.0	101
Cobalt	25.3		25.0	101	50.9		50.0	102	49.5		50.0	99
Copper	25.8		25.0	103	50.4		50.0	101	49.0		50.0	98
Lead	25.7		25.0	103	51.8		50.0	104	49.9		50.0	100
Molybdenum	26.3		25.0	105	48.5		50.0	97	49.9		50.0	100
Nickel	26.3		25.0	105	48.6		50.0	97	47.9		50.0	96
Selenium	24.8		25.0	99	51.7		50.0	103	52.0		50.0	104
Silver	24.9		25.0	100	49.9		50.0	100	50.6		50.0	101
Thallium	25.9		25.0	104	53.0		50.0	106	51.5		50.0	103
Vanadium	25.5		25.0	102	50.8		50.0	102	51.0		50.0	102
Zinc	27.4		25.0	110	50.3		50.0	101	50.7		50.0	101
Beryllium	24.8		25.0	99	60.9		50.0	122	55.8		50.0	112

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICV Source: MEICPMS4 ICV_00211 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00211

Analyte	CCV 440-99928/29 04/23/2013 11:36											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	51.2		50.0	102								
Arsenic	50.5		50.0	101								
Barium	50.7		50.0	101								
Cadmium	50.9		50.0	102								
Chromium	51.9		50.0	104								
Cobalt	51.5		50.0	103								
Copper	50.1		50.0	100								
Lead	50.6		50.0	101								
Molybdenum	49.8		50.0	100								
Nickel	49.7		50.0	99								
Selenium	51.5		50.0	103								
Silver	51.3		50.0	103								
Thallium	52.2		50.0	104								
Vanadium	51.8		50.0	104								
Zinc	50.4		50.0	101								
Beryllium	55.7		50.0	111								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99928/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.18	J	118	50-150
Arsenic	1.00	1.13		113	50-150
Beryllium	0.500	0.489	J	98	50-150
Cadmium	0.500	0.505	J	101	50-150
Barium	1.00	1.04		104	50-150
Chromium	1.00	1.01	J	101	50-150
Copper	1.00	1.07	J	107	50-150
Nickel	1.00	1.29	J	129	50-150
Lead	1.00	1.05		105	50-150
Selenium	1.00	1.05	J	105	50-150
Cobalt	0.500	0.530	J	106	50-150
Silver	1.00	1.05		105	50-150
Thallium	1.00	1.06		106	50-150
Molybdenum	1.00	1.05	J	105	50-150
Vanadium	2.00	2.09		104	50-150

Lab Sample ID: CRI 440-99928/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.17		108	50-150
Arsenic	2.00	2.00		100	50-150
Beryllium	1.00	0.987		99	50-150
Cadmium	1.00	1.03		103	50-150
Barium	2.00	2.14		107	50-150
Chromium	2.00	2.09		105	50-150
Copper	2.00	2.14		107	50-150
Nickel	2.00	2.36		118	50-150
Lead	2.00	2.10		105	50-150
Selenium	2.00	1.89	J	94	50-150
Cobalt	1.00	1.06		106	50-150
Silver	2.00	2.11		106	50-150
Thallium	2.00	2.09		105	50-150
Zinc	10.0	12.9	J	129	50-150
Molybdenum	2.00	2.07		104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-99928/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00021

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	4.00	4.13		103	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-99928/7 04/23/2013 09:13		CCB 440-99928/15 04/23/2013 11:04		CCB 440-99928/26 04/23/2013 11:29		CCB 440-99928/30 04/23/2013 11:39	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.430	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	0.637	J	0.592	J	0.571	J
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.415	J	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.153	J	0.150	J	0.120	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Lab Sample ID: ICSA 440-99928/12 Instrument ID: ICPMS5

Lab File ID: 013ICSA.d ICS Source: MEICPMS4 ICSA_00207

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.390**	
Arsenic		**0.219**	
Barium		**0.206**	
Cadmium		**1.13**	
Chromium		**1.39**	
Cobalt		**0.107**	
Copper		**1.04**	
Lead		**0.109**	
Molybdenum	**2000**	**2048**	**102**
Nickel		**0.753**	
Selenium		**-0.131**	
Silver		**0.0540**	
Thallium		**0.0270**	
Vanadium		**0.148**	
Zinc		**6.56**	
Aluminum	*100000*	*88366*	*88*
Beryllium		*0.0000*	
Calcium	*100000*	*93900*	*94*
Cerium		*0.0410*	
Iron	*100000*	*95250*	*95*
Magnesium	*100000*	*90697*	*91*
Manganese		*0.137*	
Potassium	*100000*	*94807*	*95*
Sodium	*100000*	*91480*	*91*
Sr		*4.93*	
Tin		*-0.0110*	
Uranium		*0.0100*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Lab Sample ID: ICSAB 440-99928/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00207

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.6**	**103**
Arsenic	**20.0**	**19.5**	**97**
Barium	**20.0**	**20.7**	**103**
Cadmium	**20.0**	**20.1**	**100**
Chromium	**20.0**	**19.8**	**99**
Cobalt	**20.0**	**18.5**	**93**
Copper	**20.0**	**18.8**	**94**
Lead	**20.0**	**18.7**	**94**
Molybdenum	**2020**	**2063**	**102**
Nickel	**20.0**	**19.1**	**96**
Selenium	**20.0**	**19.2**	**96**
Silver	**20.0**	**18.8**	**94**
Thallium	**20.0**	**18.7**	**93**
Vanadium	**20.0**	**18.9**	**95**
Zinc	**20.0**	**22.5**	**112**
Aluminum	*100000*	*89762*	*90*
Beryllium	*20.0*	*20.6*	*103*
Calcium	*101000*	*94756*	*94*
Cerium	*20.0*	*20.3*	*102*
Iron	*100000*	*94598*	*94*
Magnesium	*101000*	*92763*	*92*
Manganese	*20.0*	*18.9*	*94*
Potassium	*101000*	*95417*	*95*
Sodium	*101000*	*94020*	*94*
Sr	*20.0*	*25.6*	*128*
Tin	*20.0*	*20.7*	*104*
Uranium	*20.0*	*19.9*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/23/2013 End Date: 04/23/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-99928/1 IC	08:59	100		100		100		100		100	
STD1 440-99928/2 IC	09:01	100		101		100		100		100	
STD2 440-99928/3 IC	09:04	101		100		99		100		102	
STD3 440-99928/4 IC	09:06	101		100		100		99		101	
STD4 440-99928/5 IC	09:08	99		99		98		99		100	
ICV 440-99928/6	09:10	99		99		98		99		100	
ICB 440-99928/7	09:13	100		100		98		98		100	
CRI 440-99928/8	09:15	100		99		99		99		100	
CRI 440-99928/9	09:17	99		100		98		98		100	
ICSAB 440-99928/11	09:22	87		103		100		97		98	
ICSA 440-99928/12	09:46	77		101		99		96		97	
CCV 440-99928/14	11:02	54		90		92		93		101	
CCB 440-99928/15	11:04	54		88		93		94		100	
MB 440-99721/1-A	11:07	55		89		93		94		102	
LCS 440-99721/2-A	11:09	57		93		100		101		107	
240-23078-4	11:11	57		101		101		102		105	
240-23078-4 MS	11:13	60		100		99		99		101	
240-23078-4 MSD	11:15	60		100		98		98		99	
240-23078-4 PDS	11:18	62		100		98		99		100	
240-23078-2	11:24	65		103		100		100		101	
CCV 440-99928/25	11:27	74		106		102		102		106	
CCB 440-99928/26	11:29	73		101		102		102		105	
240-23078-3	11:31	72		100		100		101		103	
240-23078-3 SD	11:34	74		102		103		103		106	
CCV 440-99928/29	11:36	75		103		103		104		106	
CCB 440-99928/30	11:39	75		103		104		104		107	

No Be reported from this analysis. NO Qual

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 04/23/2013 End Date: 04/23/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-99928/1 IC	08:59	100									
STD1 440-99928/2 IC	09:01	100									
STD2 440-99928/3 IC	09:04	100									
STD3 440-99928/4 IC	09:06	101									
STD4 440-99928/5 IC	09:08	101									
ICV 440-99928/6	09:10	100									
ICB 440-99928/7	09:13	100									
CRI 440-99928/8	09:15	101									
CRI 440-99928/9	09:17	100									
ICSAB 440-99928/11	09:22	102									
ICSA 440-99928/12	09:46	101									
CCV 440-99928/14	11:02	102									
CCB 440-99928/15	11:04	103									
MB 440-99721/1-A	11:07	104									
LCS 440-99721/2-A	11:09	110									
240-23078-4	11:11	106									
240-23078-4 MS	11:13	103									
240-23078-4 MSD	11:15	102									
240-23078-4 PDS	11:18	101									
240-23078-2	11:24	101									
CCV 440-99928/25	11:27	104									
CCB 440-99928/26	11:29	104									
240-23078-3	11:31	104									
240-23078-3 SD	11:34	105									
CCV 440-99928/29	11:36	105									
CCB 440-99928/30	11:39	106									

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/24/2013 09:06 End Date: 04/24/2013 13:14

Lab Sample Id	D/F	Type	Time	Analytes
				Be
STD0 440-100261/1 IC	1		09:06	X
STD1 440-100261/2 IC	1		09:09	X
STD2 440-100261/3 IC	1		09:12	X
STD3 440-100261/4 IC	1		09:15	X
STD4 440-100261/5 IC	1		09:17	X
ICV 440-100261/6	1		09:20	X
ICB 440-100261/7	1		09:23	X
CRI 440-100261/8			09:25	
ZZZZZZ			09:28	
ICSA 440-100261/10	1		09:31	X
ICSAB 440-100261/11	1		09:34	X
RINSE 440-100261/12			09:40	
CRI 440-100261/13	1		09:43	X
CCV 440-100261/14			11:45	
CCB 440-100261/15			11:48	
ZZZZZZ			11:51	
ZZZZZZ			11:53	
ZZZZZZ			11:56	
ZZZZZZ			11:59	
ZZZZZZ			12:02	
ZZZZZZ			12:04	
ZZZZZZ			12:07	
ZZZZZZ			12:10	
ZZZZZZ			12:13	
CCV 440-100261/25	1		12:15	X
CCB 440-100261/26	1		12:18	X
ZZZZZZ			12:21	
ZZZZZZ			12:24	
ZZZZZZ			12:26	
ZZZZZZ			12:29	
ZZZZZZ			12:32	
MB 440-99721/1-A	1	R	12:35	X
LCS 440-99721/2-A	1	R	12:38	X
CCV 440-100261/34	1		12:40	X
CCB 440-100261/35	1		12:43	X
240-23078-4	1	R	12:46	X
240-23078-4 MS	1	R	12:49	X
240-23078-4 MSD	1	R	12:51	X
240-23078-4 PDS	1	R	12:54	X
ZZZZZZ			12:56	
ZZZZZZ			12:59	
240-23078-2	1	R	13:02	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/24/2013 09:06 End Date: 04/24/2013 13:14

Lab Sample Id	D/F	Type	Time	Analytes																										
				Be																										
240-23078-3	1	R	13:05	X																										
240-23078-3 SD	5	R	13:08	X																										
CCV 440-100261/45	1		13:11	X																										
CCB 440-100261/46	1		13:14	X																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-100261/6 04/24/2013 09:20				CCV 440-100261/25 04/24/2013 12:15				CCV 440-100261/34 04/24/2013 12:40			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	26.1		25.0	104	52.0		50.0	104	47.2		50.0	94
Antimony	22.8		25.0	91	47.4		50.0	95	46.0		50.0	92
Arsenic	25.9		25.0	104	49.4		50.0	99	48.3		50.0	97
Barium	25.5		25.0	102	49.5		50.0	99	47.7		50.0	95
Cadmium	25.2		25.0	101	48.8		50.0	98	46.9		50.0	94
Chromium	25.0		25.0	100	51.0		50.0	102	49.2		50.0	98
Cobalt	24.2		25.0	97	51.3		50.0	103	48.9		50.0	98
Copper	25.7		25.0	103	48.6		50.0	97	46.8		50.0	94
Lead	24.4		25.0	98	49.6		50.0	99	48.6		50.0	97
Molybdenum	26.1		25.0	105	48.0		50.0	96	46.2		50.0	92
Nickel	26.1		25.0	105	49.4		50.0	99	47.5		50.0	95
Selenium	25.8		25.0	103	51.1		50.0	102	49.8		50.0	100
Silver	25.1		25.0	101	49.4		50.0	99	46.5		50.0	93
Thallium	23.9		25.0	96	51.3		50.0	103	50.0		50.0	100
Vanadium	24.6		25.0	98	51.3		50.0	103	49.6		50.0	99
Zinc	25.7		25.0	103	46.2		50.0	92	45.4		50.0	91

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	CCV 440-100261/45 04/24/2013 13:11											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Beryllium	49.9		50.0	100								
Antimony	47.3		50.0	95								
Arsenic	49.9		50.0	100								
Barium	49.6		50.0	99								
Cadmium	48.8		50.0	98								
Chromium	52.0		50.0	104								
Cobalt	50.7		50.0	101								
Copper	48.9		50.0	98								
Lead	50.2		50.0	100								
Molybdenum	47.9		50.0	96								
Nickel	49.5		50.0	99								
Selenium	51.0		50.0	102								
Silver	50.6		50.0	101								
Thallium	51.3		50.0	103								
Vanadium	52.4		50.0	105								
Zinc	46.6		50.0	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-100261/13 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.91	J	95	50-150
Arsenic	2.00	2.06		103	50-150
Beryllium	1.00	1.05		105	50-150
Cadmium	1.00	0.998	J	100	50-150
Barium	2.00	2.03		102	50-150
Chromium	2.00	2.17		109	50-150
Copper	2.00	1.55	J	78	50-150
Nickel	2.00	2.30		115	50-150
Lead	2.00	1.93		96	50-150
Selenium	2.00	2.24		112	50-150
Cobalt	1.00	0.974	J	97	50-150
Silver	2.00	1.86		93	50-150
Thallium	2.00	1.89		94	50-150
Zinc	10.0	10.3	J	103	50-150
Molybdenum	2.00	2.81		140	50-150
Vanadium	4.00	3.78		95	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-100261/7 04/24/2013 09:23		CCB 440-100261/26 04/24/2013 12:18		CCB 440-100261/35 04/24/2013 12:43		CCB 440-100261/46 04/24/2013 13:14	
		Found	C	Found	C	Found	C	Found	C
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Antimony	2.0	0.784	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	0.278	J	0.321	J	0.281	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	0.304	J	0.298	J	0.335	J	0.296	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Lab Sample ID: ICSA 440-100261/10 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Beryllium		**0.0030**	
Aluminum	*100000*	*87774*	*88*
Antimony		*0.364*	
Arsenic		*0.222*	
Barium		*0.231*	
Cadmium		*0.0510*	
Calcium	*100000*	*92959*	*93*
Cerium		*0.0380*	
Chromium		*1.39*	
Cobalt		*0.0700*	
Copper		*0.329*	
Iron	*100000*	*92747*	*93*
Lead		*0.115*	
Magnesium	*100000*	*92831*	*93*
Manganese		*0.269*	
Molybdenum	*2000*	*2148*	*107*
Nickel		*0.910*	
Potassium	*100000*	*94483*	*94*
Selenium		*0.0340*	
Silver		*0.192*	
Sodium	*100000*	*93406*	*93*
Sr		*4.68*	
Thallium		*0.0210*	
Tin		*0.219*	
Uranium		*0.0230*	
Vanadium		*0.0790*	
Zinc		*4.78*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

Lab Sample ID: ICSAB 440-100261/11 Instrument ID: ICPMS4

Lab File ID: 012ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Beryllium	**20.0**	**26.6**	**133**
Aluminum	*100000*	*90176*	*90*
Antimony	*20.0*	*25.4*	*127*
Arsenic	*20.0*	*25.2*	*126*
Barium	*20.0*	*26.2*	*131*
Cadmium	*20.0*	*24.5*	*122*
Calcium	*101000*	*96860*	*96*
Cerium	*20.0*	*26.7*	*133*
Chromium	*20.0*	*24.5*	*122*
Cobalt	*20.0*	*22.8*	*114*
Copper	*20.0*	*23.1*	*116*
Iron	*100000*	*96110*	*96*
Lead	*20.0*	*22.8*	*114*
Magnesium	*101000*	*95569*	*95*
Manganese	*20.0*	*23.6*	*118*
Molybdenum	*2020*	*2195*	*109*
Nickel	*20.0*	*24.0*	*120*
Potassium	*101000*	*98355*	*98*
Selenium	*20.0*	*24.9*	*124*
Silver	*20.0*	*24.3*	*122*
Sodium	*101000*	*96508*	*96*
Sr	*20.0*	*31.2*	*156*
Thallium	*20.0*	*22.2*	*111*
Tin	*20.0*	*25.7*	*128*
Uranium	*20.0*	*25.7*	*129*
Vanadium	*20.0*	*23.3*	*116*
Zinc	*20.0*	*27.6*	*138*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23078-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/24/2013 End Date: 04/24/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-100261/1	09:06	100		100		100		100		100	
STD1 440-100261/2	09:09	100		99		100		99		99	
STD2 440-100261/3	09:12	94		100		100		99		99	
STD3 440-100261/4	09:15	97		102		101		101		100	
STD4 440-100261/5	09:17	99		99		99		99		99	
ICV 440-100261/6	09:20	93		99		98		99		99	
ICB 440-100261/7	09:23	93		98		97		97		98	
ICSA 440-100261/10	09:31	81		95		90		88		93	
ICSAB 440-100261/11	09:34	79		92		90		87		93	
CRI 440-100261/13	09:43	88		94		95		97		99	
CCV 440-100261/25	12:15	89		95		95		97		100	
CCB 440-100261/26	12:18	90		95		95		97		98	
MB 440-99721/1-A	12:35	91		94		93		98		101	
LCS 440-99721/2-A	12:38	90		94		93		97		101	
CCV 440-100261/34	12:40	98		97		95		101		103	
CCB 440-100261/35	12:43	91		94		93		97		99	
240-23078-4	12:46	83		90		87		88		92	
240-23078-4 MS	12:49	89		93		89		90		95	
240-23078-4 MSD	12:51	89		98		93		94		100	
240-23078-4 PDS	12:54	88		97		91		92		97	
240-23078-2	13:02	84		94		89		90		94	
240-23078-3	13:05	91		95		93		96		98	
240-23078-3 SD	13:08	98		95		93		97		99	
CCV 440-100261/45	13:11	95		95		94		98		98	
CCB 440-100261/46	13:14	94		96		94		96		98	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **May 17, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- OVGs, SELECT METALS, ALKALINITY, AMMONIA-N, CHLORIDE, DOC, NITRITE-N, NITRATE-N, ORTHOPHOSPAHTE-P, SULFATE, AND TDS**
LOCKHEED-MIDDLE RIVER COMPLEX (MRC)
SDG 240-23384-1

SAMPLES: 3/Aqueous/
MRC-MW03A-041813 MRC-MW04A-041813
MRC-MW42A-041813

Overview

The sample set for Lockheed MRC, SDG 240-23384-1, consists of three (3) aqueous environmental samples. This SDG contained no field duplicate pairs.

All samples were analyzed for select metals. Sample MRC-MW03A-041813 was also analyzed for organic volatitle gases (OVG), alkalinity, ammonia-n, chloride, dissolved organic carbon (DOC), nitrite-N, nitrate-N, orthophosphate-P, sulfate, and total dissolved solids (TDS). The samples were collected by Tetra Tech April 18th, 2013 and analyzed by TestAmerica. OVG analyses were conducted using method RSK-175. Metals analyses were conducted using methods 6020A and 6010C. Mercury analyses were conducted using method 7470A. Alkalinity analyses were conducted using method 310.1. Ammonia-N analyses were conducted using method 350.3. Chloride, nitrate-n, nitrite-n, orthophosphate-p, and sulfate analyses were conducted using method 300.0. DOC analyses were conducted using method 9060. TDS analyses were conducted using method 160.1.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, surrogate standard recoveries, laboratory control sample recoveries, matrix spike recoveries, chromatographic resolution, compound identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Methane [1]	0.11 ug/L	0.55 ug/L
Calcium [2]	248 ug/L	1240 ug/L

TO: T.Apanavage
SDG: 240-23384-1

Potassium [2]	395 ug/L	1975 ug/L
Magnesium [2]	64.2 ug/L	321 ug/L
Copper [3]	0.50 ug/L	2.5 ug/L
Molybdenum [3]	1.43 ug/L	7.1 ug/L
Silver [4]	0.14 ug/L	0.7 ug/L

[1] Maximum concentration found in preparation blanks affecting samples in preparation batch 240-82907.
[2] Maximum concentration found in preparation blanks affecting samples in preparation batch 240-82982
[3] Maximum concentration found in preparation blanks affecting samples in preparation batch 240-100766.
[4] Maximum concentration found in a calibration blank affecting samples analyzed on 4/30/13.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The matrix spike and matrix spike duplicate for preparation batch 460-82982 had a percent recoveries > 125% for silicon dioxide. The post digestion spike was within QC limits. Sample MRC-MW03A-041813 was affected. The positive result was qualified as biased high (K).

- The interference standard analyzed on 4/30/13 had a percent recovery > 120% for zinc. All samples were affected. Positive results were qualified as biased high (K).

- Sample MRC-MW04A-041813 had a percent recovery < 60% for internal standard lithium-6. The positive beryllium result was qualified as biased low (L).

- The LCS had a percent recovery > 110% for nitrate-N. Sample MRC-MW03A-041813 was affected. The positive result was qualified as biased high (K).

- The continuing calibration analyzed on 4/19/13 had percent recoveries > 110% for nitrate-n and orthophosphate-P. Sample MRC-MW03A-041813 was affected. The positive nitrate-n result was qualified as biased high (K). The orthophosphate-P result was not qualified as the sample result was non-detected.

Notes

Non-detected results were reported at the MDL.

The CRDL standard analyzed on 4/29/13 had a percent recovery > 120% for mercury. All samples were affected. No validation action was warranted as sample results were non-detected.

The CRDL standard analyzed on 4/23/13 had a percent recovery > 110% for iron. All samples were affected. No validation action was warranted as sample results were > 2X CRDL.

The matrix spike had a percent recovery > 120% for orthophosphate-P. Sample MRC-MW03A-041813 was affected. No validation action was warranted as sample result was non-detected.

TO: T.Apanavage
SDG: 240-23384-1

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted in the qualification of sample results. Continuing calibration non-compliances for nitrate-n and orthophosphate-P resulted in the qualification of sample results. LCS non-compliance for nitrate-N resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Interference standard non-compliances for zinc resulted in the qualification of sample results. Poor internal standard recoveries for sample MRC-MW04A-041813 resulted in the qualification of sample results. Matrix spike non-compliances for silicon dioxide resulted in the qualification of sample results.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993) and U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW03A-041813		
SDG: 240-23384-1	LAB_ID	240-23384-1		
FRACTION: OVG	SAMP_DATE	4/18/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ETHANE		0.1	U	
ETHENE		0.37	U	
METHANE		880		

PROJ_NO: 04795	NSAMPLE	MRC-MW03A-041813			MRC-MW04A-041813			MRC-MW42A-041813		
SDG: 240-23384-1	LAB_ID	240-23384-1			240-23384-2			240-23384-3		
FRACTION: M	SAMP_DATE	4/18/2013			4/18/2013			4/18/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.6	U	
ARSENIC		3.8	J	P	0.9	U		1.8	U	
BARIUM		68			170			630		
BERYLLIUM		0.1	U		1.1	L	N	20		
CADMIUM		0.1	U		1.9			0.22	J	P
CALCIUM		49000								
CHROMIUM		0.9	U		0.9	U		2.2	J	P
COBALT		6.5			380			290		
COPPER		11			14			5		
IRON		20000								
LEAD		1.4			0.61	J	P	1.1	J	P
MAGNESIUM		16000								
MANGANESE		240								
MERCURY		0.12	U		0.1	U		0.1	U	
MOLYBDENUM		0.76	B	A	0.69	B	A	0.4	U	
NICKEL		32			480			370		
POTASSIUM		3600	J	P						
SELENIUM		0.5	U		0.5	U		1.5	J	P
SILICON DIOXIDE		5800	K	D						
SILVER		0.1	U		0.1	U		0.2	U	
SODIUM		64000								
THALLIUM		0.2	U		0.2	U		0.4	U	
VANADIUM		3.7	J	P	0.83	J	P	1.6	U	
ZINC		120	K	K	390	K	K	410	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW03A-041813		
SDG: 240-23384-1	LAB_ID	240-23384-1		
FRACTION: MISC	SAMP_DATE	4/18/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALKALINITY		200		
AMMONIA-N		3.5		
CHLORIDE		120		
DISSOLVED ORGANIC CARBON		17		
NITRATE-N		0.16	K	CE
NITRITE-N		0.012	U	
ORTHOPHOSPHATE-P		0.044	U	
SULFATE		11		
TOTAL DISSOLVED SOLIDS		370		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23384-1

SDG No.:

Client Sample ID: MRC-MW03A-041813 | Lab Sample ID: 240-23384-1

Matrix: Water | Lab File ID: Z0042236.D

Analysis Method: RSK-175 | Date Collected: 04/18/2013 10:40

Sample wt/vol: 17(mL) | Date Analyzed: 04/22/2013 16:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: | ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 82907 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	880	B	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	93		40-122

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: MB 240-82907/19

Matrix: Water Date Extracted:

Lab File ID:(1) Z0042219.D Lab File ID:(2)

Date Analyzed:(1) 04/22/2013 13:04 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-82907/18	04/22/2013 12:52	
	240-23312-D-5 MS	04/22/2013 13:29	
	240-23312-D-5 MSD	04/22/2013 13:41	
MRC-MW03A-041813	240-23384-1	04/22/2013 16:32	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-82907/19

Matrix: Water Lab File ID: Z0042219.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 04/22/2013 13:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 82907 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.109	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	101		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0042218.D

Lab ID: LCS 240-82907/18 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	193	95	64-130	
Ethane	218	214	98	77-127	
Methane	116	102	88	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0042221.D

Lab ID: 240-23312-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	4270	11 U	4060	95	51-129	
Ethane	4570	34	4550	99	59-133	
Methane	2430	3700	6020	94	13-173	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0042222.D

Lab ID: 240-23312-D-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	4270	3850	90	5	34	51-129	
Ethane	4570	4320	94	5	34	59-133	
Methane	2430	5810	85	4	42	13-173	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW03A-041813	240-23384-1	93
	MB 240-82907/19	101
	LCS 240-82907/18	102
	240-23312-D-5 MS	101
	240-23312-D-5 MSD	97

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

RSK-175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: ZPID Start Date: 04/22/2013 09:49

Analysis Batch Number: 82907 End Date: 04/22/2013 16:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-82907/3		04/22/2013 09:49	1	Z0042203.D	
ZZZZZ		04/22/2013 10:01	1		
ZZZZZ		04/22/2013 10:13	1		
ZZZZZ		04/22/2013 10:26	10		
ZZZZZ		04/22/2013 10:38	10		
ZZZZZ		04/22/2013 10:50	10		
ZZZZZ		04/22/2013 11:02	21		
ZZZZZ		04/22/2013 11:14	21		
ZZZZZ		04/22/2013 11:27	21		
CCV 240-82907/12		04/22/2013 11:39	1		
ZZZZZ		04/22/2013 11:51	1		
ZZZZZ		04/22/2013 12:03	1		
ZZZZZ		04/22/2013 12:16	1		
ZZZZZ		04/22/2013 12:28	1		
CCV 240-82907/17		04/22/2013 12:40	1	Z0042217.D	
LCS 240-82907/18		04/22/2013 12:52	1	Z0042218.D	
MB 240-82907/19		04/22/2013 13:04	1	Z0042219.D	
ZZZZZ		04/22/2013 13:17	21		
240-23312-D-5 MS		04/22/2013 13:29	21	Z0042221.D	
240-23312-D-5 MSD		04/22/2013 13:41	21	Z0042222.D	
ZZZZZ		04/22/2013 13:53	21		
ZZZZZ		04/22/2013 14:06	21		
ZZZZZ		04/22/2013 14:18	21		
ZZZZZ		04/22/2013 14:30	21		
ZZZZZ		04/22/2013 14:42	21		
ZZZZZ		04/22/2013 14:54	21		
ZZZZZ		04/22/2013 15:07	10		
ZZZZZ		04/22/2013 15:19	10		
ZZZZZ		04/22/2013 15:31	10		
ZZZZZ		04/22/2013 15:43	10		
ZZZZZ		04/22/2013 15:56	10		
ZZZZZ		04/22/2013 16:08	10		
ZZZZZ		04/22/2013 16:20	10		
240-23384-1	MRC-MW03A-041813	04/22/2013 16:32	1	Z0042236.D	
ZZZZZ		04/22/2013 16:44	1		
ZZZZZ		04/22/2013 16:57	1		

RSK-175

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Sample No.: CCVRT 240-82907/3 Date Analyzed: 04/22/2013 09:49

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0042203.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.71		
UPPER LIMIT				2.76		
LOWER LIMIT				2.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-82907/3		04/22/2013 09:49	Z0042203.D	2.71		
CCV 240-82907/17		04/22/2013 12:40	Z0042217.D	2.71		
LCS 240-82907/18		04/22/2013 12:52	Z0042218.D	2.71		
MB 240-82907/19		04/22/2013 13:04	Z0042219.D	2.71		
240-23312-D-5 MS		04/22/2013 13:29	Z0042221.D	2.71		
240-23312-D-5 MSD		04/22/2013 13:41	Z0042222.D	2.71		
240-23384-1	MRC-MW03A-041813	04/22/2013 16:32	Z0042236.D	2.71		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23384-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23384-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909		0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392		1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489		1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655		1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512		3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705		3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319		5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657			2.572 - 2.772	2.699

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: CCV 240-82907/17 Calibration Date: 04/22/2013 12:40

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042217.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	100428		103	116	-10.7	30.0
Ethene	Ave	94091	84820		183	203	-9.9	30.0
Acetylene	Ave	27012	26760		186	188	-0.9	30.0
Ethane	Ave	102982	95118		201	218	-7.6	30.0
Propene	Ave	85073	72682		260	305	-14.6	30.0
Propane	Ave	101861	91439		286	319	-10.2	30.0
Propane, 2-methyl	Ave	100175	89945		377	420	-10.2	30.0
1,1,1-Trifluoroethane	Ave	37902	38147		2450	2440	0.6	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: CCV 240-82907/17 Calibration Date: 04/22/2013 12:40

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042217.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW03A-041813 Lab Sample ID: 240-23384-1

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 10:40

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW04A-041813 Lab Sample ID: 240-23384-2

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 12:25

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW42A-041813 Lab Sample ID: 240-23384-3

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 13:25

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW03A-041813 Lab Sample ID: 240-23384-1

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 10:40

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	3.8	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	68	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	11	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	32	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.4	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	6.5	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	120	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.76	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	3.7	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW03A-041813 Lab Sample ID: 240-23384-1

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 10:40

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	49000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	20000	200	81	ug/L			1	6010C
7440-09-7	Potassium	3600	5000	72	ug/L	J	B	1	6010C
7439-95-4	Magnesium	16000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	240	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	64000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	5800	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW04A-041813 Lab Sample ID: 240-23384-2

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 12:25

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.1	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.9	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	170	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	14	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	480	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.61	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	380	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	390	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.69	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.83	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW42A-041813 Lab Sample ID: 240-23384-3

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 13:25

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	4.0	4.0	0.60	ug/L	U		2	6020
7440-38-2	Arsenic	10	10	1.8	ug/L	U		2	6020
7440-41-7	Beryllium	20	2.0	0.20	ug/L			2	6020
7440-43-9	Cadmium	0.22	2.0	0.20	ug/L	J		2	6020
7440-39-3	Barium	630	10	0.60	ug/L			2	6020
7440-47-3	Chromium	2.2	4.0	1.8	ug/L	J		2	6020
7440-50-8	Copper	5.0	4.0	1.0	ug/L		B	2	6020
7440-02-0	Nickel	370	4.0	1.0	ug/L			2	6020
7439-92-1	Lead	1.1	2.0	0.40	ug/L	J		2	6020
7782-49-2	Selenium	1.5	10	1.0	ug/L	J		2	6020
7440-48-4	Cobalt	290	2.0	0.20	ug/L			2	6020
7440-22-4	Silver	2.0	2.0	0.20	ug/L	U		2	6020
7440-28-0	Thallium	4.0	4.0	0.40	ug/L	U		2	6020
7440-66-6	Zinc	410	40	8.0	ug/L			2	6020
7439-98-7	Molybdenum	20	20	0.40	ug/L	U		2	6020
7440-62-2	Vanadium	40	40	1.6	ug/L	U		2	6020

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW03A-041813 Lab Sample ID: 240-23384-1

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 10:40

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	200	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	370	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	120	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.16	0.10	0.023	mg/L		^ *	1	300.0
14797-55-8	Nitrate as N	0.19	0.10	0.023	mg/L		H	1	300.0
14808-79-8	Sulfate	11	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U	^	1	300.0
7664-41-7	Ammonia (as N)	3.5	0.20	0.035	mg/L			1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW03A-041813 Lab Sample ID: 240-23384-1

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2013 10:40

Reporting Basis: WET Date Received: 04/19/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	17	1.0	0.24	mg/L			1	9060

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Aparicio	Site Contact: Stu Cameron	Lab Contact: Pat O'Meara	COC No: 006960
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Aparicio@tetratech.com	Analysis Turnaround Time (in BUSdays)	Analyses	Special Instructions/QC Requirements:
Phone: (301) 528-5552		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC 2013 GW Sampling	Method of Shipment/Carrier:			
Project Number: 1BJC04795-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C / Grab G	VOCs	Total Metals	Dissolved Gases	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Mg, Na, SiO2	DOC	Sample Specific Notes / Special Instructions:
TB-041813	—	—		X						2							X							
MRC-MW03A-041813	4/18/13	1040						3	2	2			1			NG	X	X	X	X	X	X		
MRC-MW04A-041813		1225							1							NG	X							
MRC-MW42A-041813		1325							1							NG	X							

240-23384 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	4-18-13 / 1400	[signature]	Test America	4/18/13 / 1400
[signature]	TestAmerica	4/18/13 / 1530	[signature]	TA	4-19-13 900
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL 0018- 1 (04/10)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC 2013 GW SAMPLING

Report Number: 240-23384-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470 Mercury (samples 2 & 3 only for mercury) analysis were performed at the TestAmerica Irvine Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/19/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.6 C.

The following sample was listed on the Chain of Custody (COC); however, no sample was received: TB-041813. VOCs were not requested on any other sample on the COC.

DISSOLVED GASES

Sample MRC-MW03A-041813 (240-23384-1) was analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/22/2013.

Methane was detected in method blank MB 240-82907/19 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the dissolved gases analysis. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)

Sample MRC-MW03A-041813 (240-23384-1) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/22/2013 and analyzed on 04/23/2013.

Several analytes were detected in method blank MB 240-82982/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Iron and SiO2, Silica failed the recovery criteria high for the MS of sample MRC-MW03A-041813MS (240-23384-1) in batch 240-83125.

Iron failed the recovery criteria low for the MSD of sample MRC-MW03A-041813MSD (240-23384-1) in batch 240-83125. SiO2, Silica failed the recovery criteria high.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW03A-041813 (240-23384-1), MRC-MW04A-041813 (240-23384-2) and MRC-MW42A-041813 (240-23384-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/26/2013 and analyzed on 04/30/2013.

Copper and Molybdenum were detected in method blank MB 440-100766/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW42A-041813 (240-23384-3)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The matrix spike duplicate (MSD) percent recovery for batch 100766 were outside control limits for Ba. This is attributed to matrix interferences.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW03A-041813 (240-23384-1), MRC-MW04A-041813 (240-23384-2) and MRC-MW42A-041813 (240-23384-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/23/2013 and 04/29/2013 and analyzed on 04/25/2013 and 04/29/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Sample MRC-MW03A-041813 (240-23384-1) was analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 04/25/2013.

No difficulties were encountered during the TDS analysis. All quality control parameters were within the acceptance limits.

ANIONS
Sample MRC-MW03A-041813 (240-23384-1) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/19/2013 and 04/22/2013.

Nitrate as N failed the recovery criteria high for LCS 240-82779/5.

The continuing calibration verification (CCV) for orthophosphate associated with batch 82779 recovered above the upper control limit. The sample associated with this CCV was non-detect for the affected analyte; therefore, the data has been reported.

Reanalysis of the following sample was performed outside of the analytical holding time for nitrate due to the continuing calibration (CCV) being high and the sample having nitrate detected: MRC-MW03A-041813 (240-23384-1). Both in-hold and out-of-hold results to be reported.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ANIONS
Sample MRC-MW03A-041813 (240-23384-1) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/22/2013.

No difficulties were encountered during the anions analysis. All quality control parameters were within the acceptance limits.

ALKALINITY
Sample MRC-MW03A-041813 (240-23384-1) was analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/20/2013.

No difficulties were encountered during the alkalinity analysis. All quality control parameters were within the acceptance limits.

AMMONIA
Sample MRC-MW03A-041813 (240-23384-1) was analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/25/2013.

No difficulties were encountered during the ammonia analysis. All quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON
Sample MRC-MW03A-041813 (240-23384-1) was analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/23/2013.

No difficulties were encountered during the TOC analysis. All quality control parameters were within the acceptance limits.

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 23384

Client Tetra Tech Site Name

Cooler unpacked by: David D. Lee

Cooler Received on 4-19-13 Opened on 4-19-13

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF −0 °C) Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	
IR GUN# 4G	(CF +1 °C) Observed Cooler Temp. 3.6 °C	Corrected Cooler Temp. 4.6 °C	☐ See Multiple Cooler Form
IR GUN# 5G	(CF +1 °C) Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	
IR GUN# 8	(CF +1 °C) Observed Cooler Temp. ____ °C	Corrected Cooler Temp. ____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 0 Yes No
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   -Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC256691
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM SWM Date 4/19/13 by TB via Verbal Voice Mail Other TB 4/19/13
Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: LM

Did not receive 2x40ml trip blank

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____
were further preserved in Sample Receiving to meet recommended pH level(s). Preservation Lot: Nitric Acid Lot# 100110-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.
Time preservative was added to sample(s): _____.

MRC-MW03A -041813

Sample Name: 240-23384-e-1-a Acquired: 4/23/2013 8:33:00 Type: Unk
Method: Standard Method + IEC Checks(v139) Mode: CONC Corr. Factor: 1.000000
User: Roger Method: 6010B/6010C Method: 200.7 :
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.29765	898.12	4.7869	32.892	62.963	-.01495	49459.	.1340
Stddev	.23550	25.95	.4718	.193	.153	.01514	204.	.1504
%RSD	79.120	2.8894	9.8569	.58640	.24378	101.23	.41214	112.3
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	7.1586	2.6022	10.537	20135.	3602.9	2.9234	16353.	240.84
Stddev	.1330	.2391	.453	23.	24.4	1.0710	33.	.84
%RSD	1.8577	9.1883	4.3028	.11530	.67594	36.635	.20126	.34715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	1.6355	64191.	33.843	2.3795	-.7276	.16852	1.3063	22.695
Stddev	.2488	199.	.699	.8010	1.228	1.9713	1.0462	.462
%RSD	15.213	.30927	2.0644	33.662	168.8	1169.7	80.087	2.0363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

64,191 ug/L reported as 64000 ug/L

PDF created with pdfFactory trial version www.pdffactory.com

TestAmerica Canton
Target Compound Quantitation Report

MRC-MW03A-041813

Data File:	\\Ncchrom\ChromData\ZPID\20130422-19123.b\Z0042236.D		
Lims ID:	240-23384-B-1	Client ID:	MRC-MW03A-041813
Inject. Date:	22-Apr-2013 16:32:42	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0019123-036		
Misc. Info.:			
Operator:	402582	Instrument ID:	ZPID
Purge Vol:	1.000 mL	ALS Bottle#:	1
Lims Batch ID:	82907	Lims Sample ID:	36
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20130422-19123.b\RSK175.m		
Last Update:	23-Apr-2013 08:45:30	Calib Date:	18-Jan-2013 16:58:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Column Type:		Column Dia:	
Process Host:	XAWRK013		

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	0.907	0.909	-0.002	99012648	880.7	
2 Ethylene						
2		1.406				
4 Ethane						
2		1.683				
$ 5 1,1,1-Trifluoroethane						
2	2.707	2.706	0.001	92708255	2446.0	

$\frac{99012648}{112418.756} = 880.74$

reported as $\frac{880 ug}{2}$

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23384-1

Login Number: 23384
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 04/20/13 01:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-23384-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW61A-042213	240-23530-3	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/23/2013	4/25/2013	5	2	7
HG	UG/L	MRC-MW04A-041813	240-23384-2	NM	4/18/2013	4/29/2013	4/29/2013	11	0	11
HG	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW42A-041813	240-23384-3	NM	4/18/2013	4/29/2013	4/29/2013	11	0	11
M	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/24/2013	4/25/2013	2	1	3
M	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/24/2013	4/25/2013	2	1	3
M	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW04A-041813	240-23384-2	NM	4/18/2013	4/26/2013	4/30/2013	8	4	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW42A-041813	240-23384-3	NM	4/18/2013	4/26/2013	4/30/2013	8	4	12
M	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/23/2013	4	1	5
M	UG/L	MRC-MW61A-042213	240-23530-3	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/26/2013	4/30/2013	8	4	12
ALK	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ALK	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ALK	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/20/2013	4/20/2013	2	0	2
CL	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
CL	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
CL	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
DOC	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/24/2013	4/24/2013	2	0	2
DOC	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/23/2013	4/23/2013	5	0	5
DOC	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/24/2013	4/24/2013	2	0	2
NH3	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
NH3	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
NH3	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/25/2013	4/25/2013	7	0	7
NTA	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/19/2013	4/19/2013	1	0	1
NTA	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTA	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
NTA	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
NTI	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/19/2013	4/19/2013	1	0	1
NTI	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
NTI	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OPO4	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OPO4	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OPO4	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/19/2013	4/19/2013	1	0	1
PCS	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/25/2013	4/25/2013	7	0	7
PCS	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
PCS	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
SO4	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
SO4	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
SO4	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OS	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7
OS	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7
OS	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7
OS	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	TB-042213	240-23530-1	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
ETHA	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHA	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHA	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
ETHE	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHE	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHE	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
METH	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
METH	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
METH	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
OVG	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
OVG	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
OVG	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: H1

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-23384-1

SDG No.:

Instrument ID: I9 Date: 04/04/2013 11:44

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-23384-1

SDG No.:

Instrument ID: H1 Date: 04/01/2011 10:45

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23384-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-83207/1-A	04/23/2013 14:40	83207		100	100
LCS 240-83207/2-A	04/23/2013 14:40	83207		100	100
240-23415-D-1-C MS	04/23/2013 14:40	83207		100	100
240-23415-D-1-D MSD	04/23/2013 14:40	83207		100	100
240-23384-1	04/23/2013 14:40	83207		50	50

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-83207/1-A

Instrument Code: H1 Batch No.: 83725

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23415-D-1-C MS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.00		0.20	U	1.00	100	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23415-D-1-D MSD

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.02		1.00	102	69-134	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23078-A-4-D MS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	6.99		0.20	U	8.00	87	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-83207/2-A

Lab Name: TestAmerica Canton Job No.: 240-23384-1

Sample Matrix: Water LCS Source: MTHGCALW_00360

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.07		101	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100728/1-A	04/29/2013 10:05	100728		20	20
LCS 440-100728/2-A	04/29/2013 10:05	100728		20	20
240-23078-A-4-C DU	04/29/2013 10:05	100728		20	20
240-23078-A-4-D MS	04/29/2013 10:05	100728		20	20
240-23384-2	04/29/2013 10:05	100728		20	20
240-23384-3	04/29/2013 10:05	100728		20	20
240-23078-B-4-C MSD	04/29/2013 10:05	100728		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100728/1-A

Instrument Code: CV-HG2 Batch No.: 101127

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23078-B-4-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.03		8.00	88	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: Lab ID: 240-23078-A-4-C DU

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-100728/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.01		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-82982/1-A	04/22/2013 10:53	82982		50	50
LCS 240-82982/2-A	04/22/2013 10:53	82982		50	50
240-23384-1	04/22/2013 10:53	82982		50	50
240-23384-1 MS	04/22/2013 10:53	82982		50	50
240-23384-1 MSD	04/22/2013 10:53	82982		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-82982/1-A

Instrument Code: I9 Batch No.: 83125

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	248	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	395	J		6010C
7439-95-4	Magnesium	64.2	J		6010C
7439-96-5	Manganese	0.561	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

FORM III-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW03A-041813 MS
Lab ID: 240-23384-1 MS
Lab Name: TestAmerica Canton
Job No.: 240-23384-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	104000		49000		50000	109	75-125		6010C
Iron	21400		20000		1000	128	75-125	4	6010C
Potassium	56500		3600	J	50000	106	75-125		6010C
Magnesium	69700		16000		50000	107	75-125		6010C
Manganese	751		240		500	102	75-125		6010C
Sodium	117000		64000		50000	106	75-125		6010C
SiO2, Silica	9210		5800		2140	161	75-125	F	6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW03A-041813 MSD | Lab ID: 240-23384-1 MSD

Lab Name: TestAmerica Canton | Job No.: 240-23384-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	101000	50000	103	75-125	3	20		6010C
Iron	20700	1000	58	75-125	3	20	4	6010C
Potassium	55400	50000	104	75-125	2	20		6010C
Magnesium	68500	50000	104	75-125	2	20		6010C
Manganese	737	500	99	75-125	2	20		6010C
Sodium	114000	50000	100	75-125	3	20		6010C
SiO2, Silica	9230	2140	162	75-125	0	20	F	6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW03A-041813 PDS Lab ID: 240-23384-1 PDS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
SiO2, Silica	6640		5800		1070	81	80-120		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-82982/2-A

Lab Name: TestAmerica Canton Job No.: 240-23384-1

Sample Matrix: Water LCS Source: MTICP2A_00025

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	50000		100	80	120		6010C
Iron	1000	980		98	80	120		6010C
Potassium	50000	48300		97	80	120		6010C
Magnesium	50000	48900		98	80	120		6010C
Manganese	500	469		94	80	120		6010C
Sodium	50000	48500		97	80	120		6010C
SiO2, Silica	2140	2160		101	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23384-1

SDG No:

Lab Name: TestAmerica Canton Job No: 240-23384-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	49000		49600		0.20		6010C
Iron	20000		20500		1.7		6010C
Potassium	3600	J	3740	J	3.7		6010C
Magnesium	16000		16700	J	1.9		6010C
Manganese	240		246		2.0		6010C
Sodium	64000		64700		0.82		6010C
SiO2, Silica	5800		5750		0.29		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100766/1-A	04/26/2013 14:32	100766		50	50
LCS 440-100766/2-A	04/26/2013 14:32	100766		50	50
240-23530-A-3-A MS	04/26/2013 14:32	100766		50	50
240-23530-A-3-B MSD	04/26/2013 14:32	100766		50	50
240-23384-1	04/26/2013 14:32	100766		50	50
240-23384-2	04/26/2013 14:32	100766		50	50
240-23384-3	04/26/2013 14:32	100766		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100766/1-A

Instrument Code: ICPMS4 Batch No.: 101391

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.503	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	1.43	J		6020
7440-62-2	Vanadium	20	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23530-A-3-A MS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	81.3		0.43	J	80.0	101	75-125		6020
Arsenic	83.2		5.0	U	80.0	104	75-125		6020
Beryllium	86.3		4.1		80.0	103	75-125		6020
Cadmium	77.8		1.8		80.0	95	75-125		6020
Barium	600		520		80.0	97	75-125	4	6020
Chromium	76.6		2.0	U	80.0	96	75-125		6020
Copper	73.1		8.9		80.0	80	75-125		6020
Nickel	388		320		80.0	87	75-125		6020
Lead	72.0		1.3		80.0	88	75-125		6020
Selenium	72.7		5.0	U	80.0	91	75-125		6020
Cobalt	751		690		80.0	82	75-125	4	6020
Silver	82.3		0.23	J	80.0	103	75-125		6020
Thallium	72.9		0.20	J	80.0	91	75-125		6020
Zinc	445		370		80.0	95	75-125	4	6020
Molybdenum	85.6		1.1	J	80.0	106	75-125		6020
Vanadium	80.2		0.90	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23530-A-3-B MSD

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	82.7		80.0	103	75-125	2	20		6020
Arsenic	82.3		80.0	103	75-125	1	20		6020
Beryllium	88.7		80.0	106	75-125	3	20		6020
Cadmium	78.7		80.0	96	75-125	1	20		6020
Barium	597		80.0	93	75-125	1	20	4	6020
Chromium	76.6		80.0	96	75-125	0	20		6020
Copper	72.9		80.0	80	75-125	0	20		6020
Nickel	383		80.0	80	75-125	1	20		6020
Lead	71.2		80.0	87	75-125	1	20		6020
Selenium	71.9		80.0	90	75-125	1	20		6020
Cobalt	746		80.0	76	75-125	1	20	4	6020
Silver	82.7		80.0	103	75-125	0	20		6020
Thallium	72.5		80.0	91	75-125	1	20		6020
Zinc	443		80.0	94	75-125	0	20	4	6020
Molybdenum	87.6		80.0	108	75-125	2	20		6020
Vanadium	80.4		80.0	99	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: Lab ID: 240-23530-C-3-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.5		0.43	J	80.0	103	75-125		6020
Arsenic	80.8		5.0	U	80.0	101	75-125		6020
Beryllium	87.4		4.1		80.0	104	75-125		6020
Cadmium	77.8		1.8		80.0	95	75-125		6020
Barium	594		520		80.0	89	75-125		6020
Chromium	74.9		2.0	U	80.0	94	75-125		6020
Copper	71.1		8.9		80.0	78	75-125		6020
Nickel	378		320		80.0	74	75-125	W	6020
Lead	70.3		1.3		80.0	86	75-125		6020
Selenium	69.6		5.0	U	80.0	87	75-125		6020
Cobalt	735		690		80.0	62	75-125	W	6020
Silver	81.6		0.23	J	80.0	102	75-125		6020
Thallium	72.2		0.20	J	80.0	90	75-125		6020
Zinc	439		370		80.0	89	75-125		6020
Molybdenum	87.0		1.1	J	80.0	107	75-125		6020
Vanadium	78.6		0.90	J	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-100766/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	81.8		102	80	120		6020
Arsenic	80.0	83.7		105	80	120		6020
Beryllium	80.0	84.3		105	80	120		6020
Cadmium	80.0	80.9		101	80	120		6020
Barium	80.0	81.1		101	80	120		6020
Chromium	80.0	82.6		103	80	120		6020
Copper	80.0	83.9		105	80	120		6020
Nickel	80.0	82.9		104	80	120		6020
Lead	80.0	80.8		101	80	120		6020
Selenium	80.0	85.3		107	80	120		6020
Cobalt	80.0	84.0		105	80	120		6020
Silver	80.0	87.0		109	80	120		6020
Thallium	80.0	82.0		102	80	120		6020
Zinc	80.0	82.2		103	80	120		6020
Molybdenum	80.0	78.7		98	80	120		6020
Vanadium	80.0	81.9		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23592-D-8-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23384-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	2.2	J	25	U	NC		6020
Beryllium	0.41	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	120		117		1.9		6020
Chromium	1.0	J	10	U	NC		6020
Copper	1.7	J	10	U	NC		6020
Nickel	440		443		0.67		6020
Lead	0.65	J	5.0	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	580		599		4.2		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	110		119		NC		6020
Molybdenum	1.0	J	1.18	J	NC		6020
Vanadium	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/25/2013 15:46 End Date: 04/25/2013 18:05

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-83669/1-A			15:46	X
IC 240-83669/2-A			15:47	X
IC 240-83669/3-A			15:48	X
IC 240-83669/4-A			15:50	X
IC 240-83669/5-A			15:52	X
IC 240-83669/6-A			15:53	X
ICV 240-83669/7-A	1		15:57	X
ICB 240-83669/8-A	1		15:59	X
CRA 240-83669/9-A	1		16:00	X
CCVL 240-83669/10-A	1		16:03	X
CCB 240-83669/11-A			16:04	
ZZZZZZ			16:06	
ZZZZZZ			16:07	
ZZZZZZ			16:09	
ZZZZZZ			16:10	
ZZZZZZ			16:11	
ZZZZZZ			16:13	
ZZZZZZ			16:15	
ZZZZZZ			16:17	
ZZZZZZ			16:18	
ZZZZZZ			16:20	
CCV 240-83669/12-A			16:21	
CCB 240-83669/11-A			16:22	
ZZZZZZ			16:24	
ZZZZZZ			16:25	
ZZZZZZ			16:27	
ZZZZZZ			16:28	
ZZZZZZ			16:29	
ZZZZZZ			16:30	
ZZZZZZ			16:32	
ZZZZZZ			16:33	
ZZZZZZ			16:34	
ZZZZZZ			16:36	
CCV 240-83669/12-A			16:37	
CCB 240-83669/11-A			16:40	
ZZZZZZ			16:41	
ZZZZZZ			16:42	
ZZZZZZ			16:44	
ZZZZZZ			16:45	
ZZZZZZ			16:46	
ZZZZZZ			16:48	
ZZZZZZ			16:49	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/25/2013 15:46 End Date: 04/25/2013 18:05

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			16:50	
ZZZZZZ			16:52	
ZZZZZZ			16:53	
CCV 240-83669/12-A			16:55	
CCB 240-83669/11-A			16:56	
ZZZZZZ			16:57	
ZZZZZZ			16:59	
ZZZZZZ			17:00	
ZZZZZZ			17:01	
ZZZZZZ			17:03	
ZZZZZZ			17:04	
ZZZZZZ			17:05	
ZZZZZZ			17:07	
ZZZZZZ			17:08	
ZZZZZZ			17:10	
CCV 240-83669/12-A	1		17:11	X
CCB 240-83669/11-A	1		17:13	X
ZZZZZZ			17:14	
ZZZZZZ			17:15	
ZZZZZZ			17:17	
MB 240-83207/1-A	1	T	17:19	X
LCS 240-83207/2-A	1	T	17:20	X
ZZZZZZ			17:21	
240-23415-D-1-C MS	1	T	17:23	X
240-23415-D-1-D MSD	1	T	17:24	X
240-23384-1	1	T	17:25	X
ZZZZZZ			17:27	
CCV 240-83669/12-A	1		17:28	X
CCB 240-83669/11-A	1		17:29	X
ZZZZZZ			17:31	
ZZZZZZ			17:32	
ZZZZZZ			17:34	
ZZZZZZ			17:35	
ZZZZZZ			17:37	
ZZZZZZ			17:39	
ZZZZZZ			17:40	
ZZZZZZ			17:41	
ZZZZZZ			17:43	
ZZZZZZ			17:44	
CCV 240-83669/12-A			17:45	
CCB 240-83669/11-A			17:47	
ZZZZZZ			17:48	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: H1 Analysis Method: 7470A

Start Date: 04/25/2013 15:46 End Date: 04/25/2013 18:05

Lab Sample Id	D/F	Type	Time	Analytes																										
				Hg																										
ZZZZZZ			17:50																											
ZZZZZZ			17:51																											
ZZZZZZ			17:53																											
ZZZZZZ			17:54																											
ZZZZZZ			17:56																											
ZZZZZZ			17:58																											
ZZZZZZ			18:00																											
CCV 240-83669/12-A			18:02																											
CCB 240-83669/11-A			18:05																											

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00362

Analyte	ICV 240-83669/7-A 04/25/2013 15:57				CCVL 240-83669/10-A 04/25/2013 16:03				CCV 240-83669/12-A 04/25/2013 17:11			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.58		2.50	103	5.19		5.00	104	5.19		5.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00362

Analyte	CCV 240-83669/12-A 04/25/2013 17:28											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.16		5.00	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Method: 7470A Instrument ID: H1

Lab Sample ID: CRA 240-83669/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00362

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.209		105	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-83669/8-A 04/25/2013 15:59		CCB 240-83669/11-A 04/25/2013 17:13		CCB 240-83669/11-A 04/25/2013 17:29			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 04/29/2013 12:59 End Date: 04/29/2013 14:22

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-101025/6-A	1		12:59	X
IC 440-101025/7-A	1		13:02	X
IC 440-101025/8-A	1		13:04	X
IC 440-101025/9-A	1		13:06	X
IC 440-101025/10-A	1		13:09	X
IC 440-101025/11-A	1		13:11	X
ICV 440-101025/1-A	1		13:14	X
ICB 440-101025/2-A	1		13:16	X
CRA 440-101025/5-A	1		13:19	X
MB 440-100728/1-A	1	T	13:21	X
LCS 440-100728/2-A	1	T	13:24	X
ZZZZZZ			13:26	
240-23078-A-4-C DU	1	T	13:29	X
240-23078-A-4-D MS	1	T	13:31	X
240-23078-B-4-C MSD	1	T	13:34	X
ZZZZZZ			13:36	
ZZZZZZ			13:39	
ZZZZZZ			13:41	
CCV 440-101025/3-A	1		13:43	X
CCB 440-101025/4-A	1		13:46	X
ZZZZZZ			13:48	
ZZZZZZ			13:51	
ZZZZZZ			13:56	
ZZZZZZ			14:02	
ZZZZZZ			14:04	
ZZZZZZ			14:07	
ZZZZZZ			14:09	
ZZZZZZ			14:12	
240-23384-2	1	T	14:14	X
240-23384-3	1	T	14:17	X
CCV 440-101025/3-A	1		14:19	X
CCB 440-101025/4-A	1		14:22	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	ICV 440-101025/1-A 04/29/2013 13:14				CCV 440-101025/3-A 04/29/2013 13:43				CCV 440-101025/3-A 04/29/2013 14:19			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.90		8.00	99	4.08		4.00	102	4.09		4.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-101025/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.242		121	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101025/2-A 04/29/2013 13:16		CCB 440-101025/4-A 04/29/2013 13:46		CCB 440-101025/4-A 04/29/2013 14:22			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/23/2013 06:41 End Date: 04/23/2013 19:51

Lab Sample Id	D/F	Type	Time	Analytes						
				Ca	Fe	K	Mg	Mn	Na	SiO2
ICIS 240-83125/1	1		06:41	X	X	X	X	X	X	X
CALSTD 240-83125/2 IC			06:45	X	X	X	X	X	X	X
CALSTD 240-83125/3 IC			06:49	X	X	X	X	X	X	X
ICV 240-83125/4	1		06:53	X	X	X	X	X	X	X
ICB 240-83125/5	1		06:57	X	X	X	X	X	X	X
CRI 240-83125/6			07:01							
CRI 240-83125/7	1		07:05	X	X	X	X	X	X	X
ICSA 240-83125/8	1		07:09	X	X	X	X	X	X	
ICSAB 240-83125/9	1		07:13	X	X	X	X	X	X	
CCV 240-83125/10			07:17							
CCB 240-83125/11			07:20							
ZZZZZZ			07:25							
ZZZZZZ			07:29							
ZZZZZZ			07:33							
ZZZZZZ			07:37							
ZZZZZZ			07:41							
ZZZZZZ			07:45							
CCV 240-83125/18	1		07:49	X	X	X	X	X	X	X
CCB 240-83125/19	1		07:53	X	X	X	X	X	X	X
ZZZZZZ			07:58							
ZZZZZZ			08:02							
ZZZZZZ			08:06							
ZZZZZZ			08:09							
ZZZZZZ			08:13							
ZZZZZZ			08:17							
ZZZZZZ			08:21							
MB 240-82982/1-A	1	R	08:25	X	X	X	X	X	X	X
LCS 240-82982/2-A	1	R	08:29	X	X	X	X	X	X	X
240-23384-1	1	R	08:33	X	X	X	X	X	X	X
CCV 240-83125/30	1		08:36	X	X	X	X	X	X	X
CCB 240-83125/31	1		08:40	X	X	X	X	X	X	X
240-23384-1 SD	5	R	08:49	X	X	X	X	X	X	X
240-23384-1 MS	1	R	08:53	X	X	X	X	X	X	X
240-23384-1 MSD	1	R	08:56	X	X	X	X	X	X	X
ZZZZZZ			09:00							
ZZZZZZ			09:04							
ZZZZZZ			09:08							
ZZZZZZ			09:12							
ZZZZZZ			09:16							
ZZZZZZ			09:20							

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/23/2013 06:41 End Date: 04/23/2013 19:51

Lab Sample Id	D/F	Type	Time	Analytes						
				Ca	Fe	K	Mg	Mn	Na	SiO2
ZZZZZZ			09:24							
CCV 240-83125/42	1		09:28	X	X	X	X	X	X	X
CCB 240-83125/43	1		09:32	X	X	X	X	X	X	X
ZZZZZZ			09:36							
ZZZZZZ			09:40							
ZZZZZZ			09:44							
ZZZZZZ			09:48							
ZZZZZZ			09:53							
240-23384-1 PDS	1	R	09:57							X
ZZZZZZ			10:01							
ZZZZZZ			10:05							
ZZZZZZ			10:09							
ZZZZZZ			10:13							
CCV 240-83125/54	1		10:17	X	X	X	X	X	X	X
CCB 240-83125/55	1		10:21	X	X	X	X	X	X	X
ZZZZZZ			10:25							
ZZZZZZ			10:29							
ZZZZZZ			10:33							
ZZZZZZ			10:37							
ZZZZZZ			10:41							
ZZZZZZ			10:45							
ZZZZZZ			10:49							
ZZZZZZ			10:53							
ZZZZZZ			10:57							
ZZZZZZ			11:01							
CCV 240-83125/66			11:05							
CCB 240-83125/67			11:09							
ZZZZZZ			11:13							
ZZZZZZ			11:17							
ZZZZZZ			11:21							
ZZZZZZ			11:25							
ZZZZZZ			11:29							
ZZZZZZ			11:33							
ZZZZZZ			11:38							
ZZZZZZ			11:42							
ZZZZZZ			11:46							
ZZZZZZ			11:50							
CCV 240-83125/78			11:54							
CCB 240-83125/79			11:58							
ZZZZZZ			12:02							

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/23/2013 06:41 End Date: 04/23/2013 19:51

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na	SiO2																							
ZZZZZZ			12:06																													
ZZZZZZ			12:10																													
ZZZZZZ			12:14																													
ZZZZZZ			12:18																													
ZZZZZZ			12:22																													
CRI 240-83125/86	1		12:27	X	X	X	X	X	X	X																						
ZZZZZZ			12:30																													
ZZZZZZ			12:34																													
ZZZZZZ			12:38																													
CCV 240-83125/90			12:42																													
CCB 240-83125/91			12:46																													
ZZZZZZ			12:50																													
ZZZZZZ			12:54																													
ZZZZZZ			12:58																													
ZZZZZZ			13:02																													
ZZZZZZ			13:06																													
ZZZZZZ			13:10																													
ZZZZZZ			13:14																													
ZZZZZZ			13:19																													
ZZZZZZ			13:22																													
ZZZZZZ			13:26																													
CCV 240-83125/102			13:30																													
CCB 240-83125/103			13:34																													
ZZZZZZ			13:38																													
ZZZZZZ			13:42																													
ZZZZZZ			13:47																													
ZZZZZZ			13:51																													
ZZZZZZ			13:55																													
ZZZZZZ			13:59																													
ZZZZZZ			14:03																													
ZZZZZZ			14:08																													
ZZZZZZ			14:12																													
ZZZZZZ			14:17																													
CCV 240-83125/114			14:21																													
CCB 240-83125/115			14:25																													
ZZZZZZ			14:29																													
ZZZZZZ			14:33																													
ZZZZZZ			14:36																													
ZZZZZZ			14:40																													
ZZZZZZ			14:44																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/23/2013 06:41 End Date: 04/23/2013 19:51

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/23/2013 06:41 End Date: 04/23/2013 19:51

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	Fe	K	Mg	Mn	Na	SiO2																			
ZZZZZZ			17:27																										
CCV 240-83125/162			17:31																										
CCB 240-83125/163			17:35																										
ZZZZZZ			17:39																										
ZZZZZZ			17:43																										
ZZZZZZ			17:47																										
ZZZZZZ			17:51																										
ZZZZZZ			17:55																										
ZZZZZZ			17:59																										
ZZZZZZ			18:03																										
ZZZZZZ			18:07																										
ZZZZZZ			18:11																										
ZZZZZZ			18:15																										
CCV 240-83125/174			18:19																										
CCB 240-83125/175			18:23																										
ZZZZZZ			18:27																										
ZZZZZZ			18:31																										
ZZZZZZ			18:35																										
ZZZZZZ			18:39																										
ZZZZZZ			18:43																										
ZZZZZZ			18:47																										
ZZZZZZ			18:51																										
ZZZZZZ			18:54																										
ZZZZZZ			18:58																										
ZZZZZZ			19:02																										
CCV 240-83125/186			19:06																										
CCB 240-83125/187			19:10																										
ZZZZZZ			19:14																										
ZZZZZZ			19:18																										
ZZZZZZ			19:22																										
ZZZZZZ			19:26																										
ZZZZZZ			19:30																										
ZZZZZZ			19:34																										
ZZZZZZ			19:38																										
ZZZZZZ			19:43																										
ZZZZZZ			19:47																										
ZZZZZZ			19:51																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

ICV Source: MT6500ICV_00010 Concentration Units: ug/L

CCV Source: MT6500CCV_00026

Analyte	ICV 240-83125/4 04/23/2013 06:53				CCV 240-83125/18 04/23/2013 07:49				CCV 240-83125/30 04/23/2013 08:36			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25400		25000	102	52800		50000	106	53600		50000	107
Iron	12400		12500	99	25500		25000	102	25700		25000	103
Magnesium	24700		25000	99	51300		50000	103	52300		50000	105
Manganese	1500		1500	100	1950		2000	98	1950		2000	97
Potassium	24700		25000	99	51000		50000	102	51400		50000	103
SiO2, Silica	6590		6420	103	11600		10700	108	11800		10700	110
Sodium	24800		25000	99	51200		50000	102	51400		50000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

ICV Source: MT6500ICV_00010 Concentration Units: ug/L

CCV Source: MT6500CCV_00026

Analyte	CCV 240-83125/42 04/23/2013 09:28				CCV 240-83125/54 04/23/2013 10:17							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	53300		50000	107	53200		50000	106				
Iron	25700		25000	103	25500		25000	102				
Magnesium	52200		50000	104	52000		50000	104				
Manganese	1950		2000	98	1940		2000	97				
Potassium	51200		50000	102	50800		50000	102				
SiO2, Silica	11800		10700	110	11700		10700	110				
Sodium	51300		50000	103	51200		50000	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-83125/7 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRILLW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5100		102	70-130
Iron	100	114	J	114	70-130
Potassium	5000	5060		101	70-130
Magnesium	5000	5110		102	70-130
Manganese	15.0	15.5		103	70-130
Sodium	5000	5050		101	70-130
SiO2, Silica	1070	1070	J	100	70-130

Lab Sample ID: CRI 240-83125/86 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRILLW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5190		104	70-130
Iron	100	107	J	107	70-130
Potassium	5000	5060		101	70-130
Magnesium	5000	5240		105	70-130
Manganese	15.0	15.3		102	70-130
Sodium	5000	5460		109	70-130
SiO2, Silica	1070	1130		106	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-83125/5 04/23/2013 06:57		CCB 240-83125/19 04/23/2013 07:53		CCB 240-83125/31 04/23/2013 08:40		CCB 240-83125/43 04/23/2013 09:32	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U	5000	U
Iron	200	200	U	200	U	200	U	200	U
Magnesium	5000	5000	U	5000	U	5000	U	5000	U
Manganese	15	15	U	15	U	15	U	15	U
Potassium	5000	151	J	121	J	242	J	292	J
SiO2, Silica	1100	1100	U	1100	U	1100	U	1100	U
Sodium	5000	5000	U	5000	U	5000	U	5000	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: ICSA 240-83125/8 Instrument ID: I9

Lab File ID: I9042313A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**500000**	**477430**	**95**
Iron	**200000**	**185900**	**93**
Magnesium	**500000**	**492910**	**99**
Manganese		**2.81**	
Potassium		**75.3**	
Sodium		**67.6**	
Aluminum	*500000*	*501590*	*100*
Antimony		*-1.58*	
Arsenic		*0.0297*	
Barium		*0.218*	
Beryllium		*-0.365*	
Boron		*1.10*	
Cadmium		*0.264*	
Chromium		*2.99*	
Cobalt		*-1.89*	
Copper		*-0.371*	
Lead		*3.49*	
Lithium		*-23.3*	
Molybdenum		*-2.07*	
Nickel		*0.187*	
Selenium		*0.0406*	
Silicon		*-8.15*	
Silver		*0.148*	
Strontium		*6.66*	
Thallium		*-1.89*	
Tin		*4.58*	
Titanium		*-0.233*	
Vanadium		*-5.13*	
Zinc		*10.3*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Lab Sample ID: ICSAB 240-83125/9 Instrument ID: I9

Lab File ID: I9042313A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**486590**	**97**
Iron	**200000**	**188170**	**94**
Magnesium	**500000**	**502030**	**100**
Manganese	**500**	**482**	**96**
Potassium	**10000**	**10527**	**105**
Sodium	**10000**	**10509**	**105**
Aluminum	*500000*	*512740*	*103*
Antimony	*1000*	*1022*	*102*
Arsenic	*1000*	*1012*	*101*
Barium	*500*	*485*	*97*
Beryllium	*500*	*493*	*99*
Boron	*500*	*510*	*102*
Cadmium	*1000*	*1019*	*102*
Chromium	*500*	*474*	*95*
Cobalt	*500*	*480*	*96*
Copper	*500*	*520*	*104*
Lead	*1000*	*903*	*90*
Lithium	*500*	*504*	*101*
Molybdenum	*1000*	*969*	*97*
Nickel	*1000*	*956*	*96*
Selenium	*1000*	*1001*	*100*
Silicon	*10000*	*10020*	*100*
Silver	*1000*	*1086*	*109*
Strontium	*1500*	*1444*	*96*
Thallium	*1000*	*937*	*94*
Tin	*500*	*502*	*100*
Titanium	*500*	*510*	*102*
Vanadium	*500*	*481*	*96*
Zinc	*1000*	*975*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/30/2013 12:22 End Date: 04/30/2013 17:54

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn								
STD0 440-103335/1 IC	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD1 440-103335/2 IC	1		12:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD2 440-103335/3 IC	1		12:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD3 440-103335/4 IC	1		12:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD4 440-103335/5 IC	1		12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICV 440-103335/6	1		12:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICB 440-103335/7	1		12:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 440-103335/8	1		12:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CRI 440-103335/9	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSA 440-103335/10	1		12:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
RINSE 440-103335/11			12:57																								
ICSAB 440-103335/12	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
RINSE 440-103335/13			13:03																								
CCV 440-103335/14	1		16:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-103335/15	1		16:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			17:10																								
ZZZZZZ			17:13																								
ZZZZZZ			17:16																								
ZZZZZZ			17:18																								
240-23384-1	1	R	17:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23384-2	1	R	17:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23384-3	2	R	17:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 440-103335/23	1		17:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-103335/24	1		17:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			17:35																								
ZZZZZZ			17:38																								
ZZZZZZ			17:41																								
ZZZZZZ			17:43																								
ZZZZZZ			17:46																								
ZZZZZZ			17:48																								
CCV 440-103335/31			17:51																								
CCB 440-103335/32			17:54																								

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-103335/6 04/30/2013 12:36				CCV 440-103335/14 04/30/2013 16:53				CCV 440-103335/23 04/30/2013 17:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	24.2		25.0	97	45.9		50.0	92	47.1		50.0	94
Arsenic	25.4		25.0	101	47.1		50.0	94	47.8		50.0	96
Barium	25.2		25.0	101	47.8		50.0	96	47.7		50.0	95
Beryllium	24.7		25.0	99	50.4		50.0	101	51.3		50.0	103
Cadmium	24.9		25.0	100	46.9		50.0	94	47.5		50.0	95
Chromium	24.7		25.0	99	48.3		50.0	97	47.7		50.0	95
Cobalt	25.2		25.0	101	47.5		50.0	95	47.7		50.0	95
Copper	25.7		25.0	103	46.5		50.0	93	46.4		50.0	93
Lead	24.4		25.0	98	48.2		50.0	96	46.9		50.0	94
Molybdenum	25.4		25.0	102	44.8		50.0	90	45.8		50.0	92
Nickel	25.5		25.0	102	45.6		50.0	91	45.8		50.0	92
Selenium	25.4		25.0	102	49.0		50.0	98	49.3		50.0	99
Silver	23.4		25.0	94	47.0		50.0	94	48.6		50.0	97
Thallium	23.6		25.0	94	50.3		50.0	101	49.7		50.0	99
Vanadium	26.0		25.0	104	48.0		50.0	96	47.7		50.0	95
Zinc	25.3		25.0	101	49.0		50.0	98	50.6		50.0	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-103335/7 04/30/2013 12:41		CCB 440-103335/15 04/30/2013 16:55		CCB 440-103335/24 04/30/2013 17:32			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	0.236	J	0.494	J	0.360	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	0.150	J	0.143	J		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Lab Sample ID: ICSA 440-103335/10 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.307**	
Arsenic		**-0.0200**	
Barium		**0.254**	
Beryllium		**0.0060**	
Cadmium		**0.0780**	
Chromium		**1.31**	
Cobalt		**0.0830**	
Copper		**1.46**	
Lead		**0.134**	
Molybdenum	**2000**	**2304**	**115**
Nickel		**1.32**	
Selenium		**-0.268**	
Silver		**0.0640**	
Thallium		**0.0130**	
Vanadium		**0.266**	
Zinc		**5.32**	
Aluminum	*100000*	*95708*	*96*
Calcium	*100000*	*102253*	*102*
Cerium		*0.0370*	
Iron	*100000*	*104545*	*105*
Magnesium	*100000*	*101906*	*102*
Manganese		*4.52*	
Potassium	*100000*	*104914*	*105*
Sodium	*100000*	*103769*	*104*
Sr		*4.98*	
Tin		*0.283*	
Uranium		*0.0120*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

Lab Sample ID: ICSAB 440-103335/12 Instrument ID: ICPMS4

Lab File ID: 014ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**21.0**	**105**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.1**	**110**
Beryllium	**20.0**	**21.5**	**107**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.6**	**103**
Cobalt	**20.0**	**19.4**	**97**
Copper	**20.0**	**20.5**	**103**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2169**	**107**
Nickel	**20.0**	**20.3**	**101**
Selenium	**20.0**	**20.4**	**102**
Silver	**20.0**	**19.7**	**98**
Thallium	**20.0**	**18.4**	**92**
Vanadium	**20.0**	**19.7**	**99**
Zinc	**20.0**	**29.9**	**149**
Aluminum	*100000*	*86214*	*86*
Calcium	*101000*	*95832*	*95*
Cerium	*20.0*	*22.1*	*111*
Iron	*100000*	*97358*	*97*
Magnesium	*101000*	*92164*	*92*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*96198*	*96*
Sodium	*101000*	*94298*	*94*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*21.0*	*105*
Uranium	*20.0*	*20.2*	*101*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23384-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/30/2013 End Date: 04/30/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-103335/1	12:22	100		100		100		100		100	
STD1 440-103335/2	12:25	101		100		100		101		99	
STD2 440-103335/3	12:28	101		100		100		100		98	
STD3 440-103335/4	12:31	101		100		101		100		99	
STD4 440-103335/5	12:33	100		99		99		98		98	
ICV 440-103335/6	12:36	102		99		100		100		99	
ICB 440-103335/7	12:41	100		97		98		100		99	
CRI 440-103335/8	12:44	103		101		100		101		99	
CRI 440-103335/9	12:47	104		100		100		100		100	
ICSA 440-103335/10	12:50	83		91		91		89		95	
ICSAB 440-103335/12	13:00	76		89		90		89		96	
CCV 440-103335/14	16:53	73		96		98		103		105	
CCB 440-103335/15	16:55	73		93		96		102		104	
240-23384-1	17:21	66		90		91		97		104	
240-23384-2	17:24	55		89		83		82		85	
240-23384-3	17:27	71		102		101		102		103	
CCV 440-103335/23	17:30	74		100		101		105		105	
CCB 440-103335/24	17:32	72		97		98		103		104	

FORM XV - IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

FORM IX - IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-23384-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

FORM IX - IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 82820 Batch Start Date: 04/19/13 12:46 Batch Analyst: Nicholas, Courtney

Batch Method: 310.1 Batch End Date: 04/20/13 01:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	CalcMsg	FinalAmount	WCALKMSMSD 00006	WCPHENOMINER 00003	
LCS 240-82820/33		310.1		50 mL	BuretStart2 is blank	50 mL		50 mL	
MB 240-82820/34		310.1		50 mL	BuretStart2 is blank	50 mL			
240-23270-Y-5 MS		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-23270-Y-5 MSD		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-23270-J-6 DU		310.1	T	50 mL	BuretStart2 is blank	50 mL			
240-23384-H-1	MRC-MW03A-041813	310.1	T	50 mL	BuretStart2 is blank	50 mL			

Batch Notes	
pH Buffer 1 ID	4-880197
pH Buffer 2 ID	7-934942
pH Buffer 3 ID	10-925077
Sulfuric Acid Lot Number	922109
Nominal Amount Used	50 mL
Pipette ID	380194
Probe ID	WCP92
Normality of first Titrant	0.0203 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83518 Batch Start Date: 04/25/13 08:59 Batch Analyst: Penman, Nick

Batch Method: 160.1 Batch End Date: 04/26/13 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	InitialAmount	TareWeight	Weight1	Weight2	Weight3
MB 240-83518/1		160.1			100 mL	72.5575 g	72.5570 g	72.5570 g	0 g
LCS 240-83518/2		160.1			50 mL	79.4711 g	79.4968 g	79.4966 g	0 g
240-23282-A-1 DU		160.1	T	2919 umhos/cm	50 mL	72.6415 g	72.7249 g	72.7248 g	0 g
240-23384-F-1	MRC-MW03A-041813	160.1	T	739 umhos/cm	100 mL	73.7822 g	73.8196 g	73.8195 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	WCWIBBYSOLIDS 00004	
MB 240-83518/1		160.1		PASS_D	-0.00050 g	-0.00050 g	100 mL		
LCS 240-83518/2		160.1		PASS_D	0.02570 g	0.02550 g	100 mL	50 mL	
240-23282-A-1 DU		160.1	T	PASS_D	0.08340 g	0.08330 g	100 mL		
240-23384-F-1	MRC-MW03A-041813	160.1	T	PASS_D	0.03740 g	0.03730 g	100 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83518 Batch Start Date: 04/25/13 08:59 Batch Analyst: Penman, Nick

Batch Method: 160.1 Batch End Date: 04/26/13 12:00

Batch Notes	
Balance ID	B044
Batch Comment	Prep [IN 4/25/13, 09:50, Oven4, 97C] [OUT 4/26/13, 08:00, 97C]
Constant Weight (WT2) Date/Time in Oven	4/26/13, 10:45
Constant Weight (WT2) Date/Time Out	4/26/13, 11:45
Constant Weight (WT2) Temp In	179 Celsius
Constant Weight (WT2) Temp Out	179 Celsius
Uncorrected CW (Wt2) Temp In	181 Celsius
Uncorrected CW (Wt2) Temp Out	181 Celsius
Filter Paper Lot Number	950445
Date samples were placed in the oven	4/26/13, 08:00
Oven Temp when samples are put in oven	179 Celsius
Nominal Amount Used	100 mL
Date samples were removed from oven	4/26/13, 09:15
Oven Temp when samples removed from oven	178 Celsius
Oven ID	001
Uncorrected In Temperature	181 Celsius
Uncorrected Out Temperature	180 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 81752 Batch Start Date: 04/12/13 15:20 Batch Analyst: Martin, Aaron

Batch Method: 300.0 Batch End Date: 04/15/13 18:21

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00099	WCICLCS 00175			
STD1 240-81752/3		300.0		1 mL	0.025 mL				
STD2 240-81752/4		300.0		1 mL	0.125 mL				
STD3 240-81752/5		300.0		1 mL	0.25 mL				
STD4 240-81752/6		300.0		1 mL	0.5 mL				
STD5 240-81752/7		300.0		1 mL	1.25 mL				
STD6 240-81752/8		300.0		1 mL	2 mL				
STD7 240-81752/9		300.0		1 mL	2.5 mL				
STD8 240-81752/10		300.0		1 mL	3.75 mL				
STD9 240-81752/11		300.0		1 mL	5 mL				
ICV 240-81752/13		300.0		1 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 82779 Batch Start Date: 04/19/13 16:48 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/19/13 23:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00264	WCICELUENT 00078	WCICLCS 00177	WCICSOLNA1 00008	WCICSOLNB1 00008
CCV 240-82779/2		300.0		5 mL	5 mL				
CCB 240-82779/3		300.0		5 mL		5 mL			
MB 240-82779/4		300.0		5 mL		5 mL			
LCS 240-82779/5		300.0		5 mL			5 mL		
240-23384-H-1	MRC-MW03A-041813	300.0	T	5 mL					
240-23404-H-5 MS		300.0	T	5 mL				0.1 mL	0.1 mL
CCV 240-82779/14		300.0		5 mL	5 mL				
CCB 240-82779/15		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83086 Batch Start Date: 04/22/13 17:20 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/22/13 20:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00101	WCICLCS 00180			
STD1 240-83086/3		300.0		1 mL	0.025 mL				
STD2 240-83086/4		300.0		1 mL	0.125 mL				
STD3 240-83086/5		300.0		1 mL	0.25 mL				
STD4 240-83086/6		300.0		1 mL	0.5 mL				
STD5 240-83086/7		300.0		1 mL	1.25 mL				
STD6 240-83086/8		300.0		1 mL	2 mL				
STD7 240-83086/9		300.0		1 mL	2.5 mL				
STD8 240-83086/10		300.0		1 mL	3.75 mL				
STD9 240-83086/11		300.0		1 mL	5 mL				
ICV 240-83086/13		300.0		1 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83087 Batch Start Date: 04/22/13 17:20 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/22/13 20:54

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00101	WCICLCS 00180			
STD1 240-83087/3		300.0		1 mL	0.025 mL				
STD2 240-83087/4		300.0		1 mL	0.125 mL				
STD3 240-83087/5		300.0		1 mL	0.25 mL				
STD4 240-83087/6		300.0		1 mL	0.5 mL				
STD5 240-83087/7		300.0		1 mL	1.25 mL				
STD6 240-83087/8		300.0		1 mL	2 mL				
STD7 240-83087/9		300.0		1 mL	2.5 mL				
STD8 240-83087/10		300.0		1 mL	3.75 mL				
STD9 240-83087/11		300.0		1 mL	5 mL				
ICV 240-83087/13		300.0		1 mL		5 mL			

Batch Notes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83089 Batch Start Date: 04/22/13 21:10 Batch Analyst: Burns, Jill

Batch Method: 300.0 Batch End Date: 04/23/13 01:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00267	WCICELUENT 00078	WCICLCS 00180	WCICSOLNA1 00008
CCV 240-83089/1		300.0		5 mL	5 mL	5 mL			
CCB 240-83089/2		300.0		5 mL	5 mL		5 mL		
MB 240-83089/3		300.0		5 mL	5 mL		5 mL		
LCS 240-83089/4		300.0		5 mL	5 mL			5 mL	
240-23384-H-1	MRC-MW03A-041813	300.0	T	5 mL	5 mL				
240-23465-J-5 MS		300.0		5 mL	5 mL				0.1 mL
CCV 240-83089/13		300.0		5 mL	5 mL	5 mL			
CCB 240-83089/14		300.0		5 mL	5 mL		5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCICSOLNB1 00008					
CCV 240-83089/1		300.0							
CCB 240-83089/2		300.0							
MB 240-83089/3		300.0							
LCS 240-83089/4		300.0							
240-23384-H-1	MRC-MW03A-041813	300.0	T						
240-23465-J-5 MS		300.0		0.1 mL					
CCV 240-83089/13		300.0							
CCB 240-83089/14		300.0							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83090 Batch Start Date: 04/22/13 21:10 Batch Analyst: Burns, Jill

Batch Method: 300.0 Batch End Date: 04/23/13 01:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00267	WCICELUENT 00078	WCICLCS 00180	WCICSOLNA1 00008
CCV 240-83090/1		300.0		5 mL	5 mL	5 mL			
CCB 240-83090/2		300.0		5 mL	5 mL		5 mL		
MB 240-83090/3		300.0		5 mL	5 mL		5 mL		
LCS 240-83090/4		300.0		5 mL	5 mL			5 mL	
240-23384-H-1	MRC-MW03A-041813	300.0	T	5 mL	5 mL				
240-23465-J-5 MS		300.0	T	5 mL	5 mL				0.1 mL
CCV 240-83090/13		300.0		5 mL	5 mL	5 mL			
CCB 240-83090/14		300.0		5 mL	5 mL		5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCICSOLNB1 00008					
CCV 240-83090/1		300.0							
CCB 240-83090/2		300.0							
MB 240-83090/3		300.0							
LCS 240-83090/4		300.0							
240-23384-H-1	MRC-MW03A-041813	300.0	T						
240-23465-J-5 MS		300.0	T	0.1 mL					
CCV 240-83090/13		300.0							
CCB 240-83090/14		300.0							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83616 Batch Start Date: 04/25/13 12:33 Batch Analyst: Kuhle, Julie

Batch Method: 350.3 Batch End Date: 04/25/13 15:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCNH31000 00020	WCSIMPNUTRNT 00022		
CCV 240-83616/5		350.3		50 mL	50 mL	0.125 mL			
CCB 240-83616/6		350.3		50 mL	50 mL				
MB 240-83616/7		350.3		50 mL	50 mL				
LCS 240-83616/8		350.3		50 mL	50 mL		10 mL		
240-23337-G-6 MS		350.3	T	50 mL	50 mL	0.125 mL			
240-23337-G-6 MSD		350.3	T	50 mL	50 mL	0.125 mL			
CCV 240-83616/17		350.3		50 mL	50 mL	0.125 mL			
CCB 240-83616/18		350.3		50 mL	50 mL				
240-23384-F-1	MRC-MW03A-041813	350.3	T	50 mL	50 mL				
CCV 240-83616/29		350.3		50 mL	50 mL	0.125 mL			
CCB 240-83616/30		350.3		50 mL	50 mL				

Batch Notes	
Batch Comment	beakers 871943
Buffer Reagent ID Number	937650
Pipette ID	927754 380192

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Batch Number: 83269 Batch Start Date: 04/23/13 12:26 Batch Analyst: Harshman, Tom

Batch Method: 9060 Batch End Date: 04/23/13 16:58

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WC LCS 00006	WC TOC CCV 00130		
CCV 240-83269/1		9060		40 mL	40 mL		40 mL		
CCB 240-83269/2		9060		40 mL	40 mL				
MB 240-83269/3		9060		40 mL	40 mL				
LCS 240-83269/4		9060		40 mL	40 mL	40 mL			
240-23445-I-1 MS		9060	D	40 mL	40 mL		20 mL		
240-23384-C-1	MRC-MW03A-041813	9060	D	40 mL	40 mL				
CCV 240-83269/11		9060		40 mL	40 mL		40 mL		
CCB 240-83269/12		9060		40 mL	40 mL				

Batch Notes	
Lot # of Phosphoric Acid	836447
Sodium Persulfate Reagent ID Number	836449

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID:	83518 Date:	04/25/2013 08:59					
160.1	MB 240-83518/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID:	82779 Date:	04/19/2013 17:37					
300.0	MB 240-82779/4	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-82779/4	Nitrate as N	0.10	U ^	mg/L	0.10	1
300.0	MB 240-82779/4	Orthophosphate as P	0.50	U ^	mg/L	0.50	1
Batch ID:	83089 Date:	04/22/2013 21:43					
300.0	MB 240-83089/3	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-83089/3	Sulfate	1.0	U	mg/L	1.0	1
Batch ID:	83090 Date:	04/22/2013 21:43					
300.0	MB 240-83090/3	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-83090/3	Nitrate as N	0.10	U	mg/L	0.10	1
Batch ID:	82820 Date:	04/19/2013 21:27					
310.1	MB 240-82820/34	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID:	83616 Date:	04/25/2013 12:34					
350.3	MB 240-83616/7	Ammonia (as N)	0.20	U	mg/L	0.20	1
Batch ID:	83269 Date:	04/23/2013 12:48					
9060	MB 240-83269/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 82779 Date: 04/19/2013 18:43											
300.0	240-23404-H-5	Nitrite as N	0.10	U	mg/L						
300.0	240-23404-H-5 MS	Nitrite as N	2.80		mg/L	2.50	112	80-120			
300.0	240-23404-H-5	Nitrate as N	0.10	U	mg/L						^ *
300.0	240-23404-H-5 MS	Nitrate as N	2.90		mg/L	2.50	116	80-120			^
300.0	240-23404-H-5	Orthophosphate as P	0.50	U	mg/L						^
300.0	240-23404-H-5 MS	Orthophosphate as P	5.67		mg/L	2.50	227	80-120			F ^
Batch ID: 83089 Date: 04/22/2013 22:49											
300.0	240-23465-J-5	Chloride	5.1		mg/L						
300.0	240-23465-J-5 MS	Chloride	63.0		mg/L	50.0	116	80-120			
Batch ID: 83090 Date: 04/22/2013 22:49											
300.0	240-23465-J-5	Nitrite as N	0.044	J	mg/L						
300.0	240-23465-J-5 MS	Nitrite as N	2.84		mg/L	2.50	112	80-120			
300.0	240-23465-J-5	Nitrate as N	0.14		mg/L						
300.0	240-23465-J-5 MS	Nitrate as N	2.55		mg/L	2.50	96	80-120			
Batch ID: 82820 Date: 04/19/2013 21:57											
310.1	240-23270-Y-5	Alkalinity	72		mg/L						
310.1	240-23270-Y-5 MS	Alkalinity	482		mg/L	500	82	10-160			
Batch ID: 83616 Date: 04/25/2013 13:15											
350.3	240-23337-G-6	Ammonia (as N)	0.20	U	mg/L						
350.3	240-23337-G-6 MS	Ammonia (as N)	2.41		mg/L	2.50	96	75-125			
Batch ID: 83269 Date: 04/23/2013 13:51											
9060	240-23445-I-1	Dissolved Organic Carbon	2.0		mg/L						
9060	240-23445-I-1 MS	Dissolved Organic Carbon	27.3		mg/L	25.0	101	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 82820 Date: 04/19/2013 22:12											
310.1	240-23270-Y-5 MSD	Alkalinity	468		mg/L	500	79	10-160	3	24	
Batch ID: 83616 Date: 04/25/2013 13:15											
350.3	240-23337-G-6 MSD	Ammonia (as N)	2.37		mg/L	2.50	95	75-125	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	83518	Date: 04/25/2013 08:59						
160.1		240-23282-A-1	Total Dissolved Solids	1700	mg/L			
160.1		240-23282-A-1 DU	Total Dissolved Solids	1670	mg/L	3	20	
Batch ID:	82820	Date: 04/19/2013 23:59						
310.1		240-23270-J-6	Alkalinity	72	mg/L			
310.1		240-23270-J-6 DU	Alkalinity	72.7	mg/L	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 83518		Date: 04/25/2013 08:59									
						LCS Source: WCWIBBYSOLIDS_00004					
160.1	LCS 240-83518/2	Total Dissolved Solids	510		mg/L	499	102	88-110			
Batch ID: 82779		Date: 04/19/2013 17:54									
						LCS Source: WCICLCS_00177					
300.0	LCS 240-82779/5	Nitrite as N	2.70		mg/L	2.50	108	90-110			
300.0	LCS 240-82779/5	Nitrate as N	2.77		mg/L	2.50	111	90-110			^ *
300.0	LCS 240-82779/5	Orthophosphate as P	2.74		mg/L	2.50	110	90-110			^
Batch ID: 83089		Date: 04/22/2013 21:59									
						LCS Source: WCICLCS_00180					
300.0	LCS 240-83089/4	Chloride	53.0		mg/L	50.0	106	90-110			
300.0	LCS 240-83089/4	Sulfate	49.4		mg/L	50.0	99	90-110			
Batch ID: 83090		Date: 04/22/2013 21:59									
						LCS Source: WCICLCS_00180					
300.0	LCS 240-83090/4	Nitrite as N	2.59		mg/L	2.50	104	90-110			
300.0	LCS 240-83090/4	Nitrate as N	2.44		mg/L	2.50	97	90-110			
Batch ID: 82820		Date: 04/19/2013 21:21									
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-82820/33	Alkalinity	81.8		mg/L	79.5	103	90-127			
Batch ID: 83616		Date: 04/25/2013 12:34									
						LCS Source: WCSIMPNUTRNT_00022					
350.3	LCS 240-83616/8	Ammonia (as N)	7.00		mg/L	6.86	102	85-114			
Batch ID: 83269		Date: 04/23/2013 12:58									
						LCS Source: WC LCS_00006					
9060	LCS 240-83269/4	Dissolved Organic Carbon	49.3		mg/L	48.1	103	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/12/2013 15:20 End Date: 04/12/2013 18:21

Lab Sample Id	D/F	Type	Time	Analytes		
				N-No2	NO3	Orthophosasp
STD1 240-81752/3 IC	1		15:20	X	X	X
STD2 240-81752/4 IC	1		15:36	X	X	X
STD3 240-81752/5 IC	1		15:53	X	X	X
STD4 240-81752/6 IC	1		16:09	X	X	X
STD5 240-81752/7 ICRT	1		16:26	X	X	X
STD6 240-81752/8 IC	1		16:42	X	X	X
STD7 240-81752/9 IC	1		16:59	X	X	X
STD8 240-81752/10 IC	1		17:15	X	X	X
STD9 240-81752/11 IC	1		17:31	X	X	X
ZZZZZZ			17:48			
ICV 240-81752/13	1		18:04	X	X	X
ICB 240-81752/14			18:21			

Prep Types:

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FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: AM Batch Start Date: 04/12/2013

Reporting Units: mg/L Analytical Batch No.: 81752

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	18:04	Nitrite as N	2.64	2.50	106	90-110		WCICLCS_00175
			Nitrate as N	2.67	2.50	107	90-110		WCICLCS_00175
			Orthophosphate as P	2.74	2.50	110	90-110		WCICLCS_00175

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/19/2013 16:48 End Date: 04/19/2013 23:55

Lab Sample Id	D/F	Type	Time	Analytes		
				N-No2	NO3	Orthophosp P
ZZZZZZ			16:48			
CCV 240-82779/2	1		17:04	X	X	X
CCB 240-82779/3	1		17:21	X	X	X
MB 240-82779/4	1	T	17:37	X	X	X
LCS 240-82779/5	1	T	17:54	X	X	X
240-23384-1	1	T	18:10	X	X	X
ZZZZZZ			18:26			
240-23404-H-5 MS	1	T	18:43	X	X	X
ZZZZZZ			18:59			
ZZZZZZ			19:16			
ZZZZZZ			19:32			
ZZZZZZ			19:48			
ZZZZZZ			20:05			
CCV 240-82779/14	1		20:21	X	X	X
CCB 240-82779/15	1		20:38	X	X	X
ZZZZZZ			20:54			
ZZZZZZ			21:10			
ZZZZZZ			21:27			
ZZZZZZ			22:00			
ZZZZZZ			22:16			
CCV 240-82779/26			23:38			
CCB 240-82779/27			23:55			

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: LG Batch Start Date: 04/19/2013

Reporting Units: mg/L Analytical Batch No.: 82779

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
2	CCV	17:04	Nitrite as N	2.67	2.50	107	90-110		WCICCCV_00264
			Nitrate as N	2.73	2.50	109	90-110		WCICCCV_00264
			Orthophosphate as P	2.61	2.50	105	90-110		WCICCCV_00264
3	CCB	17:21	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
14	CCV	20:21	Nitrite as N	2.73	2.50	109	90-110		WCICCCV_00264
			Nitrate as N	2.78	2.50	111	90-110		WCICCCV_00264
			Orthophosphate as P	2.84	2.50	114	90-110		WCICCCV_00264
15	CCB	20:38	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/22/2013 17:20 End Date: 04/22/2013 20:54

Lab Sample Id	D/F	Type	Time	Analytes																												
				N-No2	NO3	Orthophosp																										
ZZZZZZ			17:20																													
ZZZZZZ			17:37																													
STD1 240-83087/3 IC	1		17:53	X	X	X																										
STD2 240-83087/4 IC	1		18:10	X	X	X																										
STD3 240-83087/5 IC	1		18:26	X	X	X																										
STD4 240-83087/6 IC	1		18:42	X	X	X																										
STD5 240-83087/7 ICRT	1		18:59	X	X	X																										
STD6 240-83087/8 IC	1		19:15	X	X	X																										
STD7 240-83087/9 IC	1		19:32	X	X	X																										
STD8 240-83087/10 IC	1		19:48	X	X	X																										
STD9 240-83087/11 IC	1		20:04	X	X	X																										
ZZZZZZ			20:21																													
ICV 240-83087/13	1		20:37	X	X	X																										
ICB 240-83087/14			20:54																													

Prep Types:

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FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: LG Batch Start Date: 04/22/2013

Reporting Units: mg/L Analytical Batch No.: 83087

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:37	Nitrite as N	2.60	2.50	104	90-110		WCICLCS_00180
			Nitrate as N	2.44	2.50	98	90-110		WCICLCS_00180
			Orthophosphate as P	6.20	2.50	248	90-110		WCICLCS_00180

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/22/2013 21:10 End Date: 04/23/2013 01:49

Lab Sample Id	D/F	Type	Time	Analytes																												
				N-No2	NO3																											
CCV 240-83090/1	1		21:10	X	X																											
CCB 240-83090/2	1		21:27	X	X																											
MB 240-83090/3	1	T	21:43	X	X																											
LCS 240-83090/4	1	T	21:59	X	X																											
240-23384-1 RA	1	T	22:16		X																											
ZZZZZZ			22:32																													
240-23465-J-5 MS	1	T	22:49	X	X																											
ZZZZZZ			23:05																													
CCV 240-83090/13	1		00:27	X	X																											
CCB 240-83090/14	1		00:43	X	X																											
ZZZZZZ			01:00																													
ZZZZZZ			01:16																													
CCV 240-83090/17			01:33																													
CCB 240-83090/18			01:49																													

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: JB Batch Start Date: 04/22/2013

Reporting Units: mg/L Analytical Batch No.: 83090

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	21:10	Nitrite as N	2.64	2.50	105	90-110		WCICCCV_00267
			Nitrate as N	2.42	2.50	97	90-110		WCICCCV_00267
2	CCB	21:27	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
13	CCV	00:27	Nitrite as N	2.66	2.50	106	90-110		WCICCCV_00267
			Nitrate as N	2.45	2.50	98	90-110		WCICCCV_00267
14	CCB	00:43	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/22/2013 17:20 End Date: 04/22/2013 20:54

Lab Sample Id	D/F	Type	Time	Analytes																												
				CL-	SO4																											
ZZZZZZ			17:20																													
ZZZZZZ			17:37																													
STD1 240-83086/3 IC	1		17:53	X	X																											
STD2 240-83086/4 IC	1		18:10	X	X																											
STD3 240-83086/5 IC	1		18:26	X	X																											
STD4 240-83086/6 IC	1		18:42	X	X																											
STD5 240-83086/7 ICRT	1		18:59	X	X																											
STD6 240-83086/8 IC	1		19:15	X	X																											
STD7 240-83086/9 IC	1		19:32	X	X																											
STD8 240-83086/10 IC	1		19:48	X	X																											
STD9 240-83086/11 IC	1		20:04	X	X																											
ZZZZZZ			20:21																													
ICV 240-83086/13	1		20:37	X	X																											
ICB 240-83086/14			20:54																													

Prep Types:

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FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: LG Batch Start Date: 04/22/2013

Reporting Units: mg/L Analytical Batch No.: 83086

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:37	Chloride	52.7	50.0	105	90-110		WCICLCS_00180
			Sulfate	48.9	50.0	98	90-110		WCICLCS_00180

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/22/2013 21:10 End Date: 04/23/2013 01:49

Lab Sample Id	D/F	Type	Time	Analytes																												
				CL-	SO4																											
CCV 240-83089/1	1		21:10	X	X																											
CCB 240-83089/2	1		21:27	X	X																											
MB 240-83089/3	1	T	21:43	X	X																											
LCS 240-83089/4	1	T	21:59	X	X																											
240-23384-1	1	T	22:16	X	X																											
ZZZZZZ			22:32																													
240-23465-J-5 MS	1		22:49	X																												
ZZZZZZ			23:05																													
ZZZZZZ			23:21																													
ZZZZZZ			23:38																													
ZZZZZZ			23:54																													
ZZZZZZ			00:11																													
CCV 240-83089/13	1		00:27	X	X																											
CCB 240-83089/14	1		00:43	X	X																											
ZZZZZZ			01:00																													
ZZZZZZ			01:16																													
CCV 240-83089/17			01:33																													
CCB 240-83089/18			01:49																													

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: JB Batch Start Date: 04/22/2013

Reporting Units: mg/L Analytical Batch No.: 83089

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	21:10	Chloride	53.2	50.0	106	90-110		WCICCCV_00267
			Sulfate	49.5	50.0	99	90-110		WCICCCV_00267
2	CCB	21:27	Chloride	1.0				U	
			Sulfate	1.0				U	
13	CCV	00:27	Chloride	53.9	50.0	108	90-110		WCICCCV_00267
			Sulfate	50.3	50.0	101	90-110		WCICCCV_00267
14	CCB	00:43	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/25/2013 12:33 End Date: 04/25/2013 15:40

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
IC 240-83616/1			12:33	X
IC 240-83616/2			12:33	X
IC 240-83616/3			12:33	X
IC 240-83616/4			12:33	X
CCV 240-83616/5	1		12:33	X
CCB 240-83616/6	1		12:34	X
MB 240-83616/7	1	T	12:34	X
LCS 240-83616/8	5	T	12:34	X
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
240-23337-G-6 MS	1	T	13:15	X
240-23337-G-6 MSD	1	T	13:15	X
CCV 240-83616/17	1		13:16	X
CCB 240-83616/18	1		13:38	X
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
240-23384-1	1	T	14:44	X
ZZZZZZ			14:44	
ZZZZZZ			14:45	
CCV 240-83616/29	1		14:47	X
CCB 240-83616/30	1		14:57	X
ZZZZZZ			15:00	
ZZZZZZ			15:06	
ZZZZZZ			15:39	
ZZZZZZ			15:39	
CCV 240-83616/35			15:39	
CCB 240-83616/36			15:40	

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: JK Batch Start Date: 04/25/2013

Reporting Units: mg/L Analytical Batch No.: 83616

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	CCV	12:33	Ammonia (as N)	2.27	2.50	91	90-110		WCNH31000_00020
6	CCB	12:34	Ammonia (as N)	0.20				U	
17	CCV	13:16	Ammonia (as N)	2.54	2.50	102	90-110		WCNH31000_00020
18	CCB	13:38	Ammonia (as N)	0.20				U	
29	CCV	14:47	Ammonia (as N)	2.50	2.50	100	90-110		WCNH31000_00020
30	CCB	14:57	Ammonia (as N)	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/23/2013 12:26 End Date: 04/23/2013 16:58

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-83269/1	1		12:26	X
CCB 240-83269/2	1		12:37	X
MB 240-83269/3	1	D	12:48	X
LCS 240-83269/4	2	D	12:58	X
ZZZZZZ			13:09	
240-23445-I-1 MS	2	D	13:51	X
ZZZZZZ			14:02	
ZZZZZZ			14:43	
ZZZZZZ			15:24	
240-23384-1	1	D	16:05	X
CCV 240-83269/11	1		16:47	X
CCB 240-83269/12	1		16:58	X

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Analyst: TH Batch Start Date: 04/23/2013

Reporting Units: mg/L Analytical Batch No.: 83269

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:26	Dissolved Organic Carbon	24.7	25.0	99	90-110		WC TOC CCV_00130
2	CCB	12:37	Dissolved Organic Carbon	1.0				U	
11	CCV	16:47	Dissolved Organic Carbon	25.7	25.0	103	90-110		WC TOC CCV_00130
12	CCB	16:58	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/19/2013 12:46 End Date: 04/20/2013 01:22

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			12:46	
RINSE 240-82820/2			12:55	
ZZZZZZ			13:10	
ZZZZZZ			13:19	
ZZZZZZ			13:25	
ZZZZZZ			13:28	
ZZZZZZ			15:00	
ZZZZZZ			15:23	
ZZZZZZ			15:46	
ZZZZZZ			16:10	
ZZZZZZ			16:18	
ZZZZZZ			16:25	
ZZZZZZ			16:40	
ZZZZZZ			16:52	
ZZZZZZ			17:07	
ZZZZZZ			17:17	
ZZZZZZ			17:21	
ZZZZZZ			17:29	
ZZZZZZ			17:36	
ZZZZZZ			17:42	
ZZZZZZ			17:54	
ZZZZZZ			18:06	
ZZZZZZ			18:35	
ZZZZZZ			19:04	
ZZZZZZ			19:19	
ZZZZZZ			19:33	
ZZZZZZ			19:56	
ZZZZZZ			20:00	
ZZZZZZ			20:18	
ZZZZZZ			20:45	
ZZZZZZ			20:59	
ZZZZZZ			21:13	
LCS 240-82820/33	1	T	21:21	X
MB 240-82820/34	1	T	21:27	X
ZZZZZZ			21:34	
ZZZZZZ			21:42	
240-23270-Y-5 MS	1	T	21:57	X
240-23270-Y-5 MSD	1	T	22:12	X
ZZZZZZ			22:16	
ZZZZZZ			22:27	
ZZZZZZ			22:48	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/19/2013 12:46 End Date: 04/20/2013 01:22

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			22:59	
ZZZZZZ			23:10	
ZZZZZZ			23:21	
ZZZZZZ			23:30	
ZZZZZZ			23:36	
ZZZZZZ			23:44	
ZZZZZZ			23:52	
240-23270-J-6 DU	1	T	23:59	X
ZZZZZZ			00:03	
ZZZZZZ			00:11	
ZZZZZZ			00:18	
ZZZZZZ			00:26	
ZZZZZZ			00:34	
ZZZZZZ			00:42	
ZZZZZZ			00:55	
ZZZZZZ			01:09	
240-23384-1	1	T	01:18	X
ZZZZZZ			01:22	

Prep Types:
T = Total/NA

FORM XIII-IN

Report Date: 4/20/2013 : 10:00 AM

Instrument ID: Steve

TestAmerica

310.1, 2320B, 305.1, 2310B, 340.2, 4500F-C

Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
rinse-1	4/19/2013	12:46 PM	-1.00	8.77	3.34	46.74	40.06	6.68	.00	-1.00	-1.00
rinse-2	4/19/2013	12:55 PM	-1.00	8.93	4.79	47.47	37.90	9.58	.00	-1.00	-1.00
PH 7	4/19/2013	1:10 PM	-1.00	6.97	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
LCS 917873	4/19/2013	1:19 PM	-1.00	8.20	.00	82.28	82.28	.00	.00	-1.00	-1.00
MB	4/19/2013	1:25 PM	-1.00	7.33	.00	2.00	2.00	.00	.00	-1.00	-1.00
PH 7A	4/19/2013	1:28 PM	-1.00	7.05	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du	4/19/2013	3:00 PM	-1.00	8.43	7.23	447.01	432.55	14.46	.00	-1.00	-1.00
240-23234-J-1	4/19/2013	3:23 PM	-1.00	8.48	10.32	459.94	439.30	20.64	.00	-1.00	-1.00
ms	4/19/2013	3:46 PM	-1.00	9.89	251.79	939.28	435.70	503.58	.00	-1.00	-1.00
msd	4/19/2013	4:10 PM	-1.00	9.88	257.36	943.56	428.84	514.72	.00	-1.00	-1.00
240-23235-G-1	4/19/2013	4:18 PM	-1.00	7.67	.00	108.60	108.60	.00	.00	-1.00	-1.00
240-23236-G-1	4/19/2013	4:25 PM	-1.00	6.91	.00	35.43	35.43	.00	.00	-1.00	-1.00
240-23243-I-1	4/19/2013	4:40 PM	-1.00	6.99	.00	511.00	511.00	.00	.00	-1.00	-1.00
240-23243-I-3	4/19/2013	4:52 PM	-1.00	6.01	.00	312.73	312.73	.00	.00	-1.00	-1.00
240-23243-I-9	4/19/2013	5:07 PM	-1.00	6.76	.00	507.16	507.16	.00	.00	-1.00	-1.00
240-23243-I-11	4/19/2013	5:17 PM	-1.00	8.48	7.64	230.66	215.37	15.29	.00	-1.00	-1.00
PH 7-2	4/19/2013	5:21 PM	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
10-23264-O-1@1(	4/19/2013	5:29 PM	-1.00	7.00	.00	73.87	73.87	.00	.00	-1.00	-1.00
240-23287-H-1@5	4/19/2013	5:36 PM	-1.00	6.36	.00	72.39	72.39	.00	.00	-1.00	-1.00
240-23229-G-1@2	4/19/2013	5:42 PM	-1.00	6.24	.00	51.14	51.14	.00	.00	-1.00	-1.00
du 240-23312-I-5	4/19/2013	5:54 PM	-1.00	7.19	.00	342.91	342.91	.00	.00	-1.00	-1.00
240-23312-I-5	4/19/2013	6:06 PM	-1.00	7.37	.00	333.15	333.15	.00	.00	-1.00	-1.00

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Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BICarbonate	Carbonate	Hydroxide	Fluoride	Acid
240-23312-I-4	4/19/2013	6:35 PM	-1.00	6.96	.00	1,207.57	1,207.57	.00	.00	-1.00	-1.00
240-23312-I-12	4/19/2013	7:04 PM	-1.00	5.62	.00	1,027.05	1,027.05	.00	.00	-1.00	-1.00
240-23312-I-13	4/19/2013	7:19 PM	-1.00	7.18	.00	512.91	512.91	.00	.00	-1.00	-1.00
240-23312-I-14	4/19/2013	7:33 PM	-1.00	7.24	.00	463.68	463.68	.00	.00	-1.00	-1.00
240-23312-I-15	4/19/2013	7:56 PM	-1.00	6.79	.00	847.84	847.84	.00	.00	-1.00	-1.00
PH 7-3	4/19/2013	8:00 PM	-1.00	7.04	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-23312-I-16	4/19/2013	8:18 PM	-1.00	7.08	.00	693.30	693.30	.00	.00	-1.00	-1.00
240-23312-I-17	4/19/2013	8:45 PM	-1.00	6.87	.00	1,017.39	1,017.39	.00	.00	-1.00	-1.00
240-23319-I-1	4/19/2013	8:59 PM	-1.00	7.33	.00	486.36	486.36	.00	.00	-1.00	-1.00
240-23320-I-1	4/19/2013	9:13 PM	-1.00	7.53	.00	430.36	430.36	.00	.00	-1.00	-1.00
LCS 2	4/19/2013	9:21 PM	-1.00	8.14	.00	81.81	81.81	.00	.00	-1.00	-1.00
MB 2	4/19/2013	9:27 PM	-1.00	6.39	.00	1.23	1.23	.00	.00	-1.00	-1.00
du	4/19/2013	9:34 PM	-1.00	7.13	.00	71.32	71.32	.00	.00	-1.00	-1.00
240-23270-Y-5	4/19/2013	9:42 PM	-1.00	7.16	.00	71.62	71.62	.00	.00	-1.00	-1.00
ms	4/19/2013	9:57 PM	-1.00	10.08	149.13	482.12	183.86	298.26	.00	-1.00	-1.00
msd	4/19/2013	10:12 PM	-1.00	10.08	150.95	468.19	166.29	301.91	.00	-1.00	-1.00
PH 7-4	4/19/2013	10:16 PM	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-23151-J-4	4/19/2013	10:27 PM	-1.00	7.95	.00	289.35	289.35	.00	.00	-1.00	-1.00
240-23161-J-1	4/19/2013	10:48 PM	-1.00	8.50	35.82	829.66	758.01	71.65	.00	-1.00	-1.00
240-23161-J-2	4/19/2013	10:59 PM	-1.00	7.85	.00	311.86	311.86	.00	.00	-1.00	-1.00
240-23161-J-3	4/19/2013	11:10 PM	-1.00	7.93	.00	310.02	310.02	.00	.00	-1.00	-1.00
240-23161-J-4	4/19/2013	11:21 PM	-1.00	7.80	.00	260.21	260.21	.00	.00	-1.00	-1.00
240-23270-I-1	4/19/2013	11:30 PM	-1.00	7.25	.00	196.01	196.01	.00	.00	-1.00	-1.00
240-23270-I-2	4/19/2013	11:36 PM	-1.00	6.36	.00	1.22	1.22	.00	.00	-1.00	-1.00
240-23270-I-3	4/19/2013	11:44 PM	-1.00	7.26	.00	138.57	138.57	.00	.00	-1.00	-1.00
240-23270-I-4	4/19/2013	11:52 PM	-1.00	7.24	.00	137.57	137.57	.00	.00	-1.00	-1.00
du	4/19/2013	11:59 PM	-1.00	7.20	.00	72.69	72.69	.00	.00	-1.00	-1.00
ph 7-5	4/20/2013	12:03 AM	-1.00	7.03	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

PC-TitratION PLUS by Man-Tech Associates, Inc.

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Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
240-23270-J-6	4/20/2013	12:11 AM	-1.00	7.17	.00	71.76	71.76	.00	.00	-1.00	-1.00
240-23270-I-7	4/20/2013	12:18 AM	-1.00	7.76	.00	41.56	41.56	.00	.00	-1.00	-1.00
240-23270-I-8	4/20/2013	12:26 AM	-1.00	7.76	.00	52.41	52.41	.00	.00	-1.00	-1.00
240-23270-I-9	4/20/2013	12:34 AM	-1.00	7.75	.00	38.34	38.34	.00	.00	-1.00	-1.00
240-23377-J-1	4/20/2013	12:42 AM	-1.00	8.01	.00	66.57	66.57	.00	.00	-1.00	-1.00
240-23378-J-1	4/20/2013	12:55 AM	-1.00	7.54	.00	379.33	379.33	.00	.00	-1.00	-1.00
240-23321-I-1	4/20/2013	1:09 AM	-1.00	7.68	.00	440.24	440.24	.00	.00	-1.00	-1.00
240-23384-H-1	4/20/2013	1:18 AM	-1.00	7.13	.00	200.80	200.80	.00	.00	-1.00	-1.00
ph 7-6	4/20/2013	1:22 AM	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23384-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 04/25/2013 08:59 End Date: 04/25/2013 08:59

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-83518/1	1	T	08:59	X
LCS 240-83518/2	1	T	08:59	X
240-23282-A-1 DU	1	T	08:59	X
ZZZZZZ			08:59	
ZZZZZZ			08:59	
240-23384-1	1	T	08:59	X
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
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ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	

Prep Types:
T = Total/NA

FORM XIII-IN

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **May 20, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOC, 1,4-DIOXANE, OVGs, SELECT METALS, ALKALINITY, AMMONIA-N, CHLORIDE, DOC, NITRITE-N, NITRATE-N, ORTHOPHOSPAHTE-P, SULFATE, AND TDS**
LOCKHEED-MIDDLE RIVER COMPLEX (MRC)
SDG 240-23530-1

SAMPLES: 6/Aqueous/

MRC-MW-21A-042213	MRC-MW-21B-042213
MRC-MW-22A-042213	MRC-MW25A-042213
MRC-MW61A-042213	TB-042213

Overview

The sample set for Lockheed MRC, SDG 240-23530-1, consists of five (5) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

Samples MRC-MW-21A-042213, MRC-MW-21B-042213, MRC-MW-22A-042213, MRC-MW25A-042213, MRC-MW61A-042213, and TB-042213 were analyzed for volatile organic compounds (VOC). Samples MRC-MW-21A-042213, MRC-MW-21B-042213, MRC-MW-22A-042213, and MRC-MW25A-042213 were analyzed for 1,4-dioxane. Samples MRC-MW-21B-042213 and MRC-MW25A-042213 were analyzed for organic volatile gases (OVG), alkalinity, ammonia, chloride, dissolved organic carbon (DOC), nitrite-N, nirtrate-N, orthophosphate-P, sulfate, and total dissolved solids (TDS). Samples MRC-MW-21A-042213, MRC-MW-21B-042213, MRC-MW-22A-042213, MRC-MW25A-042213, and MRC-MW61A-042213 were analyzed for select metals. The samples were collected by Tetra Tech April 22nd , 2013 and analyzed by TestAmerica. VOC analyses were conducted suing method 8260B. 1,4-dioxane analyses were conducted using method 8270D. OVG analyses were conducted using method RSK-175. Metals analyses were conducted using methods 6020A and 6010C. Mercury analyses were conducted using method 7470A. Alkalinity analyses were conducted using method 310.1. Ammonia-N analyses were conducted using method 350.3. Chloride, nitrate-n, nitrite-n, orthophosphate-p, and sulfate analyses were conducted using method 300.0. DOC analyses were conducted using method 9060. TDS analyses were conducted using method 160.1.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, GC/MS tuning, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, surrogate standard recoveries, laboratory control sample recoveries, matrix spike recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- The initial calibration analyzed on 4/4/13 on had a relative percent difference < 0.05 for tert-butyl alcohol and vinyl acetate. All samples were affected. All non-detected results were qualified

rejected (UR).

- The continuing calibration analyzed on 4/29/13 on had a relative percent difference < 0.05 for tert-butyl alcohol and vinyl acetate. All samples were affected. All non-detected results were qualified rejected (UR).

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Naphthalene [1]	0.71 ug/L	3.5 ug/L
Copper [2]	0.50 ug/L	2.5 ug/L
Molybdenum [2]	1.43 ug/L	7.1 ug/L
Mercury [3]	0.11 ug/L	0.55 ug/L
Potassium [4]	85.7 ug/L	428.5 ug/L
Silver [5]	0.16 ug/L	0.8 ug/L
Silver [6]	0.15 ug/L	0.75 ug/L

[1] Maximum concentration found in a trip blank affecting all samples analyzed for VOCs.
[2] Maximum concentration found in preparation blanks affecting samples in preparation batch 240-100766.
[3] Maximum concentration found in a calibration blank affecting samples analyzed on 5/1/13.
[4] Maximum concentration found in a calibration blank affecting samples analyzed on 4/25/13.
[5] Maximum concentration found in a calibration blank affecting sample MRC-MW61A-042213.
[6] Maximum concentration found in a calibration blank affecting samples MRC-MW-21A-042213, MRC-MW-21B-042213, MRC-MW-22A-042213, and MRC-MW25A-042213.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The continuing calibration analyzed on 4/29/13 on had a relative percent difference a percent difference > 25% for dichlorodifluoromethane. All samples were affected. Non-detected results were qualified as estimated (UJ).

- The CRDL standard analyzed on 4/30/13 had a percent recovery > 110% for copper, nickel, and zinc and percent recovery< 90% for selenium and silver. Sample MRC-MW61A-042213 was affected. The positive copper result was qualified as estimated (J) due to conflicting directional bias. The non-detected selenium result was qualified as biased low (UL). No validation action was warranted for silver, nickel and zinc.

- The interference standard analyzed on 4/30/13 had a percent recovery > 120% for zinc. Sample MRC-MW61A-042213 was affected. The positive zinc result was qualified as biased high (K).

- The CRDL standard analyzed on 4/30/13 had a percent recovery > 110% for copper, nickel, and zinc. Samples MRC-MW-21A-042213, MRC-MW-21B-042213, MRC-MW-22A-042213, and MRC-MW25A-042213 were affected. The positive copper and zinc results <2X CRDL were qualified as estimated (J) due to conflicting directional bias. No validation action was warranted

for nickel.

- The interference standard analyzed on 4/30/13 had a percent recovery > 120% for zinc. Samples MRC-MW-21A-042213, MRC-MW-21B-042213, MRC-MW-22A-042213, and MRC-MW25A-042213 were affected. The positive zinc result was qualified as either biased high (K) ore estimated (J) due to conflicting directional bias.

- The matrix spike had percent recoveries > 120% for chloride, sulfate, nitrate-N, and nitrite-N and a percent recovery < 80% for orthophosphate-P. Positive chloride and sulfate results were qualified as biased high (K). Non-detected orthophosphate-P results were qualified as biased low (UL). No validation action was warranted for the non-detected nitrate-N and nitrite-N results.

Notes

Non-detected results were reported at the MDL.

All samples analyzed for VOCs were also evaluated for tentatively identified compounds (TICs).

Samples MRC-MW-21B-042213 (20X) and MRC-MW25A-042213 (7.69X) were analyzed at dilution for VOC analyses.

The matrix spike and matrix spike duplicate for the VOC analyses had several non-compliances however it was not a sample within the SDG therefore; no validation action was warranted.

The CRDL standard analyzed on 5/1/13 had a percent recovery > 120% for mercury. All samples were affected. No validation action was taken because samples were either non-detected resulted or qualified for blank contamination.

The continuing calibration analyzed on 4/23/13 at 19:16 had a percent recovery > 110% for orthophosphate-P. No validation action was warranted as sample results were non-detected.

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted in the qualification of sample results. Major continuing calibration non-compliances for tert-butyl alcohol and vinyl acetate resulted in the rejection of sample results. Minor continuing calibration non-compliances for dichlorodifluoromethane resulted in the qualification of sample results. CRDL standard non-compliances for copper, nickel, zinc, selenium, and silver resulted in the qualification of sample results.

Other Factors Affecting Data Quality: Interference standard non-compliances for zinc resulted in the qualification of sample results. Matrix spike non-compliances for chloride, sulfate, nitrate-N, nitrite-N, and orthophosphate-P resulted in the qualification of sample res

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993) and U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator



Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW-21A-042213			MRC-MW-21B-042213			MRC-MW-22A-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-4			240-23530-5			240-23530-6			240-23530-2		
FRACTION: OV	SAMP_DATE	4/22/2013			4/22/2013			4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U		4.6	U		0.23	U		1.8	U	
1,1,1-TRICHLOROETHANE	0.22	U		4.4	U		0.22	U		1.7	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U		3.6	U		0.18	U		1.4	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U		5.6	U		0.28	U		2.2	U	
1,1-DICHLOROETHANE	4.6			10	J	P	0.15	U		1.2	U	
1,1-DICHLOROETHENE	5.9			120			0.19	U		1.5	U	
1,1-DICHLOROPROPENE	0.13	U		2.6	U		0.13	U		1	U	
1,2,3-TRICHLOROBENZENE	0.17	U		3.4	U		0.17	U		1.3	U	
1,2,3-TRICHLOROPROPANE	0.43	U		8.6	U		0.43	U		3.3	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U		0.12	U		0.0059	U		0.045	U	
1,2,4-TRICHLOROBENZENE	0.15	U		3	U		0.15	U		1.2	U	
1,2,4-TRIMETHYLBENZENE	0.12	U		2.4	U		0.12	U		0.92	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U		13	U		0.67	U		5.2	U	
1,2-DIBROMOETHANE	0.24	U		4.8	U		0.24	U		1.8	U	
1,2-DICHLOROBENZENE	0.13	U		2.6	U		0.13	U		1	U	
1,2-DICHLOROETHANE	0.22	U		4.4	U		0.22	U		1.7	U	
1,2-DICHLOROPROPANE	0.18	U		3.6	U		0.18	U		1.4	U	
1,3-DICHLOROBENZENE	0.14	U		2.8	U		0.14	U		1.1	U	
1,3-DICHLOROPROPANE	0.16	U		3.2	U		0.16	U		1.2	U	
1,4-DICHLOROBENZENE	0.13	U		2.6	U		0.13	U		1	U	
2,2-DICHLOROPROPANE	0.13	U		2.6	U		0.13	U		1	U	
2-BUTANONE	0.57	U		11	U		0.57	U		4.4	U	
2-CHLOROETHYL VINYL ETHER	0.99	U		20	U		0.99	U		7.6	U	
2-CHLOROTOLUENE	0.11	U		2.2	U		0.11	U		0.85	U	
2-HEXANONE	0.41	U		8.2	U		0.41	U		3.2	U	
4-CHLOROTOLUENE	0.18	U		3.6	U		0.18	U		1.4	U	
4-ISOPROPYLTOLUENE	0.12	U		2.4	U		0.12	U		0.92	U	
4-METHYL-2-PENTANONE	0.32	U		6.4	U		0.32	U		2.5	U	
ACETONE	1.1	J	P	22	U		1.1	U		8.5	U	
BENZENE	0.13	U		23			0.13	U		1.3	J	P
BROMOBENZENE	0.13	U		2.6	U		0.13	U		1	U	
BROMOCHLOROMETHANE	0.29	U		5.8	U		0.29	U		2.2	U	
BROMODICHLOROMETHANE	0.15	U		3	U		0.15	U		1.2	U	
BROMOFORM	0.64	U		13	U		0.64	U		4.9	U	
BROMOMETHANE	0.41	U		8.2	U		0.41	U		3.2	U	
CARBON DISULFIDE	0.13	U		2.6	U		0.13	U		1	U	

PROJ_NO: 04795	NSAMPLE	TB-042213
SDG: 240-23530-1	LAB_ID	240-23530-1
FRACTION: OV	SAMP_DATE	4/22/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U	
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U	
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.1	U	
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	
CARBON DISULFIDE	0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-21A-042213			MRC-MW-21B-042213			MRC-MW-22A-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-4			240-23530-5			240-23530-6			240-23530-2		
FRACTION: OV	SAMP_DATE	4/22/2013			4/22/2013			4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		2.6	U		0.13	U		1	U	
CHLOROBENZENE		0.15	U		3	U		0.15	U		1.2	U	
CHLORODIBROMOMETHANE		0.18	U		3.6	U		0.18	U		1.4	U	
CHLOROETHANE		0.29	U		5.8	U		0.29	U		2.2	U	
CHLOROFORM		0.16	U		3.2	U		0.16	U		1.2	U	
CHLOROMETHANE		0.3	U		6	U		0.3	U		2.3	U	
CIS-1,2-DICHLOROETHENE		0.55	J	P	5.3	J	P	0.17	U		9.9		
CIS-1,3-DICHLOROPROPENE		0.14	U		2.8	U		0.14	U		1.1	U	
DIBROMOMETHANE		0.28	U		5.6	U		0.28	U		2.2	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	6.2	UJ	C	0.31	UJ	C	2.4	UJ	C
DIISOPROPYL ETHER		1.5	U		30	U		1.5	U		12	U	
ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-		1.6	NJ	Z1									
ETHYL TERT-BUTYL ETHER		0.11	U		2.2	U		0.11	U		0.85	U	
ETHYLBENZENE		0.17	U		3.4	U		0.17	U		1.3	U	
HEXACHLOROBUTADIENE		0.3	U		6	U		0.3	U		2.3	U	
ISOPROPYLBENZENE		0.13	U		9.4	J	P	0.13	U		1	U	
M+P-XYLENES		0.24	U		4.8	U		0.24	U		1.8	U	
METHYL TERT-BUTYL ETHER		0.17	U		3.4	U		0.17	U		1.3	U	
METHYLENE CHLORIDE		0.33	U		6.6	U		0.33	U		2.5	U	
NAPHTHALENE		0.24	U		4.8	U		0.24	U		1.8	U	
N-BUTYLBENZENE		0.12	U		2.4	U		0.12	U		0.92	U	
N-PROPYLBENZENE		0.14	U		2.8	U		0.14	U		1.1	U	
O-XYLENE		0.14	U		2.8	U		0.14	U		1.1	U	
SEC-BUTYLBENZENE		0.13	U		2.6	U		0.13	U		1	U	
SILANOL, TRIMETHYL-, PROPANOATE													
STYRENE		0.11	U		2.2	U		0.11	U		0.85	U	
TERT-AMYL METHYL ETHER		0.067	U		1.3	U		0.067	U		0.52	U	
TERT-BUTYLBENZENE		0.13	U		2.6	U		0.13	U		1	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	78	UR	C	3.9	UR	C	30	UR	C
TETRACHLOROETHENE		0.5	J	P	5.8	U		0.29	U		2.2	U	
TOLUENE		0.13	U		2.6	U		0.13	U		1	U	
TOTAL XYLENES		0.28	U		5.6	U		0.28	U		2.2	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		3.8	U		0.19	U		1.5	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		3.8	U		0.19	U		1.5	U	
TRICHLOROETHENE		5.3			660			0.59	J	P	230		

PROJ_NO: 04795	NSAMPLE	TB-042213
SDG: 240-23530-1	LAB_ID	240-23530-1
FRACTION: OV	SAMP_DATE	4/22/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	UJ	C
DIISOPROPYL ETHER	1.5	U	
ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-			
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.71	J	P
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
SILANOL, TRIMETHYL-, PROPANOATE	1.9	R	Z2
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	
TRICHLOROETHENE	0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-21A-042213			MRC-MW-21B-042213			MRC-MW-22A-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-4			240-23530-5			240-23530-6			240-23530-2		
FRACTION: OV	SAMP_DATE	4/22/2013			4/22/2013			4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		4.2	U		0.21	U		1.6	U	
UNKNOWN		1.3	NJ	Z2									
VINYL ACETATE		0.19	UR	C	3.8	UR	C	0.19	UR	C	1.5	UR	C
VINYL CHLORIDE		0.79	J	P	4.4	U		0.22	U		1.7	U	

PROJ_NO: 04795	NSAMPLE	TB-042213		
SDG: 240-23530-1	LAB_ID	240-23530-1		
FRACTION: OV	SAMP_DATE	4/22/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U	
UNKNOWN				
VINYL ACETATE		0.19	UR	C
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-21A-042213			MRC-MW-21B-042213			MRC-MW-22A-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-4			240-23530-5			240-23530-6			240-23530-2		
FRACTION: OS	SAMP_DATE	4/22/2013			4/22/2013			4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		2.7			34			0.5	U		1.5		

PROJ_NO: 04795	NSAMPLE	MRC-MW-21B-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-5			240-23530-2		
FRACTION: OVG	SAMP_DATE	4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		0.1	U		0.1	U	
ETHENE		0.37	U		0.37	U	
METHANE		11			11		

PROJ_NO: 04795	NSAMPLE	MRC-MW-21A-042213			MRC-MW-21B-042213			MRC-MW-22A-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-4			240-23530-5			240-23530-6			240-23530-2		
FRACTION: M	SAMP_DATE	4/22/2013			4/22/2013			4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.6	U		0.3	U		0.3	U		0.3	U	
ARSENIC		2.3	J	P	0.9	U		0.9	U		0.9	U	
BARIUM		64			110			42			180		
BERYLLIUM		0.7	J	P	1.2			0.1	J	P	2.9		
CADMIUM		0.2	U		0.1	U		0.1	U		0.13	J	P
CALCIUM					6600						23000		
CHROMIUM		2.9	J	P	0.9	U		0.9	U		0.9	U	
COBALT		7.1			70			32			93		
COPPER		3.5	J	CP	0.5	U		0.5	U		1.1	B	A
IRON					31000						18000		
LEAD		1.3	J	P	0.2	U		0.2	U		0.3	J	P
MAGNESIUM					6700						6300		
MANGANESE					3100						3200		
MERCURY		0.1	U		0.1	U		0.1	U		0.17	B	A
MOLYBDENUM		0.89	B	A	0.2	U		0.2	U		0.96	B	A
NICKEL		6.4			81			59			130		
POTASSIUM					2600	J	P				2600	J	P
SELENIUM		1	U		0.5	U		0.5	U		0.5	U	
SILICON DIOXIDE					15000						11000		
SILVER		0.2	U		0.1	U		0.1	U		0.1	U	
SODIUM					14000						62000		
THALLIUM		0.4	U		0.2	U		0.2	U		0.2	U	
VANADIUM		4.8	J	P	0.8	U		0.8	U		0.8	J	P
ZINC		38	J	CKP	160	K	K	66	K	K	130	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW61A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-3		
FRACTION: M	SAMP_DATE	4/22/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.43	J	P
ARSENIC		0.9	U	
BARIUM		520		
BERYLLIUM		4.1		
CADMIUM		1.8		
CALCIUM				
CHROMIUM		0.9	U	
COBALT		690		
COPPER		8.9	J	CP
IRON				
LEAD		1.3		
MAGNESIUM				
MANGANESE				
MERCURY		0.1	U	
MOLYBDENUM		1.1	B	A
NICKEL		320		
POTASSIUM				
SELENIUM		0.5	UL	C
SILICON DIOXIDE				
SILVER		0.23	B	A
SODIUM				
THALLIUM		0.2	J	P
VANADIUM		0.9	J	P
ZINC		370	K	K

PROJ_NO: 04795	NSAMPLE	MRC-MW-21B-042213			MRC-MW25A-042213		
SDG: 240-23530-1	LAB_ID	240-23530-5			240-23530-2		
FRACTION: MISC	SAMP_DATE	4/22/2013			4/22/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		36			61		
AMMONIA-N		0.084	J	P	0.047	J	P
CHLORIDE		70	J	D	140	J	D
DISSOLVED ORGANIC CARBON		0.67	J	P	1.5		
NITRATE-N		0.023	U		0.023	U	
NITRITE-N		0.012	U		0.012	U	
ORTHOPHOSPHATE-P		0.044	UL	D	0.044	UL	D
SULFATE		1.9	J	D	2.4	J	D
TOTAL DISSOLVED SOLIDS		170			270		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21A-042213 Lab Sample ID: 240-23530-4

Matrix: Water Lab File ID: UXC1149.D

Analysis Method: 8260B Date Collected: 04/22/2013 11:31

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	1.1	J	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.55	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	4.6		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	5.9		1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21A-042213 | Lab Sample ID: 240-23530-4

Matrix: Water | Lab File ID: UXC1149.D

Analysis Method: 8260B | Date Collected: 04/22/2013 11:31

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	0.50	J	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	5.3		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.79	J	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21A-042213 | Lab Sample ID: 240-23530-4

Matrix: Water | Lab File ID: UXC1149.D

Analysis Method: 8260B | Date Collected: 04/22/2013 11:31

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		63-129
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21A-042213 Lab Sample ID: 240-23530-4

Matrix: Water Lab File ID: UXC1149.D

Analysis Method: 8260B Date Collected: 04/22/2013 11:31

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 2 TIC Result Total: 2.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Unknown	1.62	1.3	T J
354-23-4	Ethane, 1,2-dichloro-1,1,2-trifluoro-	2.10	1.6	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21B-042213 | Lab Sample ID: 240-23530-5

Matrix: Water | Lab File ID: UXC1150.D

Analysis Method: 8260B | Date Collected: 04/22/2013 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:08

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	100	U	100	22
71-43-2	Benzene	23		20	2.6
108-86-1	Bromobenzene	20	U	20	2.6
74-97-5	Bromochloromethane	20	U	20	5.8
75-27-4	Bromodichloromethane	20	U	20	3.0
75-25-2	Bromoform	20	U	20	13
74-83-9	Bromomethane	20	U	20	8.2
78-93-3	2-Butanone	100	U	100	11
75-15-0	Carbon disulfide	20	U	20	2.6
56-23-5	Carbon tetrachloride	20	U	20	2.6
108-90-7	Chlorobenzene	20	U	20	3.0
75-00-3	Chloroethane	20	U	20	5.8
110-75-8	2-Chloroethyl vinyl ether	200	U	200	20
67-66-3	Chloroform	20	U	20	3.2
74-87-3	Chloromethane	20	U	20	6.0
95-49-8	2-Chlorotoluene	20	U	20	2.2
106-43-4	4-Chlorotoluene	20	U	20	3.6
156-59-2	cis-1,2-Dichloroethene	5.3	J	20	3.4
10061-01-5	cis-1,3-Dichloropropene	20	U	20	2.8
124-48-1	Dibromochloromethane	20	U	20	3.6
96-12-8	1,2-Dibromo-3-Chloropropane	100	U	100	13
106-93-4	1,2-Dibromoethane	20	U	20	4.8
74-95-3	Dibromomethane	20	U	20	5.6
95-50-1	1,2-Dichlorobenzene	20	U	20	2.6
541-73-1	1,3-Dichlorobenzene	20	U	20	2.8
106-46-7	1,4-Dichlorobenzene	20	U	20	2.6
75-71-8	Dichlorodifluoromethane	20	U	20	6.2
75-34-3	1,1-Dichloroethane	10	J	20	3.0
107-06-2	1,2-Dichloroethane	20	U	20	4.4
75-35-4	1,1-Dichloroethene	120		20	3.8
78-87-5	1,2-Dichloropropane	20	U	20	3.6
142-28-9	1,3-Dichloropropane	20	U	20	3.2
594-20-7	2,2-Dichloropropane	20	U	20	2.6
563-58-6	1,1-Dichloropropene	20	U	20	2.6
108-20-3	Diisopropyl ether	100	U	100	30
100-41-4	Ethylbenzene	20	U	20	3.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Matrix: Water Lab File ID: UXC1150.D

Analysis Method: 8260B Date Collected: 04/22/2013 12:45

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 18:08

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	100	U	100	2.2
87-68-3	Hexachlorobutadiene	20	U	20	6.0
591-78-6	2-Hexanone	100	U	100	8.2
98-82-8	Isopropylbenzene	9.4	J	20	2.6
75-09-2	Methylene Chloride	20	U	20	6.6
108-10-1	4-Methyl-2-pentanone	100	U	100	6.4
1634-04-4	Methyl tert-butyl ether	20	U	20	3.4
179601-23-1	m-Xylene & p-Xylene	40	U	40	4.8
91-20-3	Naphthalene	20	U	20	4.8
104-51-8	n-Butylbenzene	20	U	20	2.4
103-65-1	n-Propylbenzene	20	U	20	2.8
95-47-6	o-Xylene	20	U	20	2.8
99-87-6	p-Isopropyltoluene	20	U	20	2.4
135-98-8	sec-Butylbenzene	20	U	20	2.6
100-42-5	Styrene	20	U	20	2.2
994-05-8	Tert-amyl-methyl ether (TAME)	100	U	100	1.3
75-65-0	tert-Butyl alcohol	400	U	400	78
98-06-6	tert-Butylbenzene	20	U	20	2.6
630-20-6	1,1,1,2-Tetrachloroethane	20	U	20	4.6
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	3.6
127-18-4	Tetrachloroethene	20	U	20	5.8
108-88-3	Toluene	20	U	20	2.6
156-60-5	trans-1,2-Dichloroethene	20	U	20	3.8
10061-02-6	trans-1,3-Dichloropropene	20	U	20	3.8
87-61-6	1,2,3-Trichlorobenzene	20	U	20	3.4
120-82-1	1,2,4-Trichlorobenzene	20	U	20	3.0
71-55-6	1,1,1-Trichloroethane	20	U	20	4.4
79-01-6	Trichloroethene	660		20	3.4
75-69-4	Trichlorofluoromethane	20	U	20	4.2
96-18-4	1,2,3-Trichloropropane	20	U	20	8.6
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	20	U	20	5.6
526-73-8	1,2,3-Trimethylbenzene	100	U	100	0.12
95-63-6	1,2,4-Trimethylbenzene	20	U	20	2.4
108-05-4	Vinyl acetate	40	U	40	3.8
75-01-4	Vinyl chloride	20	U	20	4.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Matrix: Water Lab File ID: UXC1150.D

Analysis Method: 8260B Date Collected: 04/22/2013 12:45

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 18:08

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	40	U	40	5.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
1868-53-7	Dibromofluoromethane (Surr)	96		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	94		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21B-042213 | Lab Sample ID: 240-23530-5

Matrix: Water | Lab File ID: UXC1150.D

Analysis Method: 8260B | Date Collected: 04/22/2013 12:45

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:08

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I-TIC 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-22A-042213 | Lab Sample ID: 240-23530-6

Matrix: Water | Lab File ID: UXC1151.D

Analysis Method: 8260B | Date Collected: 04/22/2013 15:11

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-22A-042213 | Lab Sample ID: 240-23530-6

Matrix: Water | Lab File ID: UXC1151.D

Analysis Method: 8260B | Date Collected: 04/22/2013 15:11

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.59	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-22A-042213 | Lab Sample ID: 240-23530-6

Matrix: Water | Lab File ID: UXC1151.D

Analysis Method: 8260B | Date Collected: 04/22/2013 15:11

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	99		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-22A-042213 Lab Sample ID: 240-23530-6

Matrix: Water Lab File ID: UXC1151.D

Analysis Method: 8260B Date Collected: 04/22/2013 15:11

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 18:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Matrix: Water Lab File ID: UXC1148.D

Analysis Method: 8260B Date Collected: 04/22/2013 13:20

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 17:24

Soil Aliquot Vol: Dilution Factor: 7.69

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	38	U	38	8.5
71-43-2	Benzene	1.3	J	7.7	1.0
108-86-1	Bromobenzene	7.7	U	7.7	1.0
74-97-5	Bromochloromethane	7.7	U	7.7	2.2
75-27-4	Bromodichloromethane	7.7	U	7.7	1.2
75-25-2	Bromoform	7.7	U	7.7	4.9
74-83-9	Bromomethane	7.7	U	7.7	3.2
78-93-3	2-Butanone	38	U	38	4.4
75-15-0	Carbon disulfide	7.7	U	7.7	1.0
56-23-5	Carbon tetrachloride	7.7	U	7.7	1.0
108-90-7	Chlorobenzene	7.7	U	7.7	1.2
75-00-3	Chloroethane	7.7	U	7.7	2.2
110-75-8	2-Chloroethyl vinyl ether	77	U	77	7.6
67-66-3	Chloroform	7.7	U	7.7	1.2
74-87-3	Chloromethane	7.7	U	7.7	2.3
95-49-8	2-Chlorotoluene	7.7	U	7.7	0.85
106-43-4	4-Chlorotoluene	7.7	U	7.7	1.4
156-59-2	cis-1,2-Dichloroethene	9.9		7.7	1.3
10061-01-5	cis-1,3-Dichloropropene	7.7	U	7.7	1.1
124-48-1	Dibromochloromethane	7.7	U	7.7	1.4
96-12-8	1,2-Dibromo-3-Chloropropane	38	U	38	5.2
106-93-4	1,2-Dibromoethane	7.7	U	7.7	1.8
74-95-3	Dibromomethane	7.7	U	7.7	2.2
95-50-1	1,2-Dichlorobenzene	7.7	U	7.7	1.0
541-73-1	1,3-Dichlorobenzene	7.7	U	7.7	1.1
106-46-7	1,4-Dichlorobenzene	7.7	U	7.7	1.0
75-71-8	Dichlorodifluoromethane	7.7	U	7.7	2.4
75-34-3	1,1-Dichloroethane	7.7	U	7.7	1.2
107-06-2	1,2-Dichloroethane	7.7	U	7.7	1.7
75-35-4	1,1-Dichloroethene	7.7	U	7.7	1.5
78-87-5	1,2-Dichloropropane	7.7	U	7.7	1.4
142-28-9	1,3-Dichloropropane	7.7	U	7.7	1.2
594-20-7	2,2-Dichloropropane	7.7	U	7.7	1.0
563-58-6	1,1-Dichloropropene	7.7	U	7.7	1.0
108-20-3	Diisopropyl ether	38	U	38	12
100-41-4	Ethylbenzene	7.7	U	7.7	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW25A-042213 | Lab Sample ID: 240-23530-2

Matrix: Water | Lab File ID: UXC1148.D

Analysis Method: 8260B | Date Collected: 04/22/2013 13:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 17:24

Soil Aliquot Vol: | Dilution Factor: 7.69

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	38	U	38	0.85
87-68-3	Hexachlorobutadiene	7.7	U	7.7	2.3
591-78-6	2-Hexanone	38	U	38	3.2
98-82-8	Isopropylbenzene	7.7	U	7.7	1.0
75-09-2	Methylene Chloride	7.7	U	7.7	2.5
108-10-1	4-Methyl-2-pentanone	38	U	38	2.5
1634-04-4	Methyl tert-butyl ether	7.7	U	7.7	1.3
179601-23-1	m-Xylene & p-Xylene	15	U	15	1.8
91-20-3	Naphthalene	7.7	U	7.7	1.8
104-51-8	n-Butylbenzene	7.7	U	7.7	0.92
103-65-1	n-Propylbenzene	7.7	U	7.7	1.1
95-47-6	o-Xylene	7.7	U	7.7	1.1
99-87-6	p-Isopropyltoluene	7.7	U	7.7	0.92
135-98-8	sec-Butylbenzene	7.7	U	7.7	1.0
100-42-5	Styrene	7.7	U	7.7	0.85
994-05-8	Tert-amyl-methyl ether (TAME)	38	U	38	0.52
75-65-0	tert-Butyl alcohol	150	U	150	30
98-06-6	tert-Butylbenzene	7.7	U	7.7	1.0
630-20-6	1,1,1,2-Tetrachloroethane	7.7	U	7.7	1.8
79-34-5	1,1,2,2-Tetrachloroethane	7.7	U	7.7	1.4
127-18-4	Tetrachloroethene	7.7	U	7.7	2.2
108-88-3	Toluene	7.7	U	7.7	1.0
156-60-5	trans-1,2-Dichloroethene	7.7	U	7.7	1.5
10061-02-6	trans-1,3-Dichloropropene	7.7	U	7.7	1.5
87-61-6	1,2,3-Trichlorobenzene	7.7	U	7.7	1.3
120-82-1	1,2,4-Trichlorobenzene	7.7	U	7.7	1.2
71-55-6	1,1,1-Trichloroethane	7.7	U	7.7	1.7
79-01-6	Trichloroethene	230		7.7	1.3
75-69-4	Trichlorofluoromethane	7.7	U	7.7	1.6
96-18-4	1,2,3-Trichloropropane	7.7	U	7.7	3.3
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	7.7	U	7.7	2.2
526-73-8	1,2,3-Trimethylbenzene	38	U	38	0.045
95-63-6	1,2,4-Trimethylbenzene	7.7	U	7.7	0.92
108-05-4	Vinyl acetate	15	U	15	1.5
75-01-4	Vinyl chloride	7.7	U	7.7	1.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW25A-042213 | Lab Sample ID: 240-23530-2

Matrix: Water | Lab File ID: UXC1148.D

Analysis Method: 8260B | Date Collected: 04/22/2013 13:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 17:24

Soil Aliquot Vol: | Dilution Factor: 7.69

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	15	U	15	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
2037-26-5	Toluene-d8 (Surr)	94		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Matrix: Water Lab File ID: UXC1148.D

Analysis Method: 8260B Date Collected: 04/22/2013 13:20

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 17:24

Soil Aliquot Vol: Dilution Factor: 7.69

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: TB-042213 | Lab Sample ID: 240-23530-1

Matrix: Water | Lab File ID: UXC1147.D

Analysis Method: 8260B | Date Collected: 04/22/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 17:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: TB-042213 | Lab Sample ID: 240-23530-1

Matrix: Water | Lab File ID: UXC1147.D

Analysis Method: 8260B | Date Collected: 04/22/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 17:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	0.71	J	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: TB-042213 Lab Sample ID: 240-23530-1

Matrix: Water Lab File ID: UXC1147.D

Analysis Method: 8260B Date Collected: 04/22/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 17:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	92		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: TB-042213 Lab Sample ID: 240-23530-1

Matrix: Water Lab File ID: UXC1147.D

Analysis Method: 8260B Date Collected: 04/22/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 17:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
16844-98-7	Silanol, trimethyl-, propanoate	3.68	1.9	T J N

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21A-042213 | Lab Sample ID: 240-23530-4

Matrix: Water | Lab File ID: 30429030.D

Analysis Method: 8270D | Date Collected: 04/22/2013 11:31

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1030(mL) | Date Analyzed: 04/29/2013 20:50

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	2.7		0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	71		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	71		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	71		21-110
4165-62-2	Phenol-d5 (Surr)	70		21-110
1718-51-0	Terphenyl-d14 (Surr)	47		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21B-042213 | Lab Sample ID: 240-23530-5

Matrix: Water | Lab File ID: 30429023.D

Analysis Method: 8270D | Date Collected: 04/22/2013 12:45

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1000(mL) | Date Analyzed: 04/29/2013 18:04

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	34		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	67		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	68		21-110
1718-51-0	Terphenyl-d14 (Surr)	56		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-22A-042213 | Lab Sample ID: 240-23530-6

Matrix: Water | Lab File ID: 30429024.D

Analysis Method: 8270D | Date Collected: 04/22/2013 15:11

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 980(mL) | Date Analyzed: 04/29/2013 18:28

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		20-110
367-12-4	2-Fluorophenol (Surr)	59		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	58		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	59		21-110
1718-51-0	Terphenyl-d14 (Surr)	50		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW25A-042213 | Lab Sample ID: 240-23530-2

Matrix: Water | Lab File ID: 30429029.D

Analysis Method: 8270D | Date Collected: 04/22/2013 13:20

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 990(mL) | Date Analyzed: 04/29/2013 20:26

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.5		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	67		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	68		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	68		21-110
1718-51-0	Terphenyl-d14 (Surr)	54		24-110

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Matrix: Water Lab File ID: Z0042519.D

Analysis Method: RSK-175 Date Collected: 04/22/2013 12:45

Sample wt/vol: 17(mL) Date Analyzed: 04/25/2013 14:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83473 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	11		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	95		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Matrix: Water Lab File ID: Z0042518.D

Analysis Method: RSK-175 Date Collected: 04/22/2013 13:20

Sample wt/vol: 17(mL) Date Analyzed: 04/25/2013 13:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83473 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	11		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	88		40-122

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-21A-042213 Lab Sample ID: 240-23530-4

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 11:31

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 12:45

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-22A-042213 Lab Sample ID: 240-23530-6

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 15:11

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 13:20

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.17	0.20	0.10	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW61A-042213 Lab Sample ID: 240-23530-3

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 15:10

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-21A-042213 Lab Sample ID: 240-23530-4

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 11:31

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	4.0	4.0	0.60	ug/L	U		2	6020
7440-38-2	Arsenic	2.3	10	1.8	ug/L	J		2	6020
7440-41-7	Beryllium	0.70	2.0	0.20	ug/L	J		2	6020
7440-43-9	Cadmium	2.0	2.0	0.20	ug/L	U		2	6020
7440-39-3	Barium	64	10	0.60	ug/L			2	6020
7440-47-3	Chromium	2.9	4.0	1.8	ug/L	J		2	6020
7440-50-8	Copper	3.5	4.0	1.0	ug/L	J	B	2	6020
7440-02-0	Nickel	6.4	4.0	1.0	ug/L			2	6020
7439-92-1	Lead	1.3	2.0	0.40	ug/L	J		2	6020
7782-49-2	Selenium	10	10	1.0	ug/L	U		2	6020
7440-48-4	Cobalt	7.1	2.0	0.20	ug/L			2	6020
7440-22-4	Silver	2.0	2.0	0.20	ug/L	U		2	6020
7440-28-0	Thallium	4.0	4.0	0.40	ug/L	U		2	6020
7440-66-6	Zinc	38	40	8.0	ug/L	J		2	6020
7439-98-7	Molybdenum	0.89	20	0.40	ug/L	J	B	2	6020
7440-62-2	Vanadium	4.8	40	1.6	ug/L	J		2	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 12:45

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.2	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	110	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	81	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	70	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	160	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 12:45

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	6600	5000	130	ug/L			1	6010C
7439-89-6	Iron	31000	200	81	ug/L			1	6010C
7440-09-7	Potassium	2600	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	6700	5000	34	ug/L			1	6010C
7439-96-5	Manganese	3100	15	0.41	ug/L			1	6010C
7440-23-5	Sodium	14000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	15000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-22A-042213 Lab Sample ID: 240-23530-6

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 15:11

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.10	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	42	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	59	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	32	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	66	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 13:20

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	2.9	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.13	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	180	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.1	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	130	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.30	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	93	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	130	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.96	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.80	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 13:20

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	23000	5000	130	ug/L			1	6010C
7439-89-6	Iron	18000	200	81	ug/L			1	6010C
7440-09-7	Potassium	2600	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	6300	5000	34	ug/L			1	6010C
7439-96-5	Manganese	3200	15	0.41	ug/L			1	6010C
7440-23-5	Sodium	62000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	11000	1100	14	ug/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW61A-042213 Lab Sample ID: 240-23530-3

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 15:10

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.43	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	4.1	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.8	1.0	0.10	ug/L			1	6020
7440-39-3	Barium	520	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	8.9	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	320	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.3	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	690	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.23	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.20	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	370	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.1	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.90	20	0.80	ug/L	J		1	6020

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 12:45

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	36	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	170	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	70	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	1.9	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U	^	1	300.0
7664-41-7	Ammonia (as N)	0.084	0.20	0.035	mg/L	J		1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 13:20

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	61	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	270	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	140	1.0	0.10	mg/L			1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	2.4	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U	^	1	300.0
7664-41-7	Ammonia (as N)	0.047	0.20	0.035	mg/L	J		1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW-21B-042213 Lab Sample ID: 240-23530-5

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 12:45

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	0.67	1.0	0.24	mg/L	J		1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW25A-042213 Lab Sample ID: 240-23530-2

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG ID.:

Matrix: Water Date Sampled: 04/22/2013 13:20

Reporting Basis: WET Date Received: 04/23/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	1.5	1.0	0.24	mg/L			1	9060

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apicerno	Site Contact: Stu Cameron	Lab Contact: Pat O'Meara	COC No: 006964
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5552	Telephone: (703)542-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apicerno@tetratech.com	Analysis Turnaround Time (in BUS days)	Analyses	
Phone: (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC 2013 GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04795	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Container Qty	VOCs	Total Metals	1,4-Dioxane	Dissolved Gas	DOC	Ammonia	Alkalinity, TDS, Anions	Fe, K, Mn, Ca, Mg, Na, SiO2	Sample Specific Notes / Special Instructions:
TB-042213	4/22/13	—		X						2							X								
MRC-MW-25A-042213		1320		X				3	2	5			3		N	6	X	X	X	X	X	X	X	X	
MRC-MW61A-042213		1510		X					1						N	6		X							MS/MSD
MRC-MW-21A-042213		1131		X					1	3			2				X	X							
MRC-MW-21B-042213		1245		X				3	2	5			3				X	X	X	X	X	X	X		
MRC-MW-22A-042213	4	1511		X					1	3			2		4	4	X	X							

240-23530 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: Tetra Tech	Date/Time: 4/22/13 – 1600	Received by:	Company: TestAmerica	Date/Time: 4/22/13 1600
Relinquished by:	Company: TestAmerica	Date/Time: 4/22/13 1640	Received by:	Company: TA	Date/Time: 4-23-13 910
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC 2013 GW Sampling

Report Number: 240-23530-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and 7470A Mercury analysis were performed at the TestAmerica Irvine Laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/23/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 1.7 and 2.3 C.

Sample TB-042213 is not marked for any analyses on the chain of custody. The lab will log the sample for VOCs per the volume received (2x40mL vials).

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-042213 (240-23530-1), MRC-MW25A-042213 (240-23530-2), MRC-MW-21A-042213 (240-23530-4), MRC-MW-21B-042213 (240-23530-5) and MRC-MW-22A-042213 (240-23530-6) were analyzed for volatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/29/2013.

Samples MRC-MW25A-042213 (240-23530-2)[7.69X] and MRC-MW-21B-042213 (240-23530-5)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW25A-042213 (240-23530-2), MRC-MW-21A-042213 (240-23530-4), MRC-MW-21B-042213 (240-23530-5) and MRC-MW-22A-042213 (240-23530-6) were analyzed for semivolatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/25/2013 and analyzed on 04/29/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 83555.

No other difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 04/25/2013.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 240-83473.

No other difficulties were encountered during the dissolved gases analyses. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 04/24/2013 and analyzed on 04/25/2013.

Iron and Manganese failed the recovery criteria low for the MSD of sample MRC-MW-21B-042213MSD (240-23530-5) in batch 240-83643.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW25A-042213 (240-23530-2), MRC-MW61A-042213 (240-23530-3), MRC-MW-21A-042213 (240-23530-4), MRC-MW-21B-042213 (240-23530-5) and MRC-MW-22A-042213 (240-23530-6) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/26/2013 and analyzed on 04/30/2013.

Copper and Molybdenum were detected in method blank MB 440-100766/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The matrix spike duplicate (MSD) percent recovey and 100766 were outside control limits for Ba. This is attributed to matrix interferences.

The following samples were diluted due to the nature of the sample matrix: MRC-MW25A-042213 (240-23530-2) and MRC-MW-21A-042213 (240-23530-4). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW25A-042213 (240-23530-2), MRC-MW61A-042213 (240-23530-3), MRC-MW-21A-042213 (240-23530-4), MRC-MW-21B-042213 (240-23530-5) and MRC-MW-22A-042213 (240-23530-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 05/01/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 04/25/2013.

No difficulties were encountered during the TDS analyses. All quality control parameters were within the acceptance limits.

ANIONS
Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/23/2013.

Orthophosphate as P failed the recovery criteria low for the MS of sample MRC-MW-21B-042213MS (240-23530-5) in batch 240-83257. Nitrate as N and Nitrite as N failed the recovery criteria high.

The continuing calibration verification (CCV) for orthophosphate associated with batch 83257 recovered above the upper control limit. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ANIONS
Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/23/2013.

Chloride and Sulfate failed the recovery criteria high for the MS of sample MRC-MW-21B-042213MS (240-23530-5) in batch 240-83256.

No other difficulties were encountered during the anions analyses. All other quality control parameters were within the acceptance limits.

ALKALINITY
Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 04/25/2013.

No difficulties were encountered during the alkalinity analyses. All quality control parameters were within the acceptance limits.

AMMONIA

Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 04/25/2013.

No difficulties were encountered during the ammonia analyses. All quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Samples MRC-MW25A-042213 (240-23530-2) and MRC-MW-21B-042213 (240-23530-5) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 04/24/2013.

No difficulties were encountered during the TOC analyses. All quality control parameters were within the acceptance limits.

Report Date: 30-Apr-2013 08:01:16 Chrom Revision: 2.0 01-Apr-2013 21:16:10
Data File: \\Ncchrom\ChromData\A3UX15\20130429-19357.b\UXC1150.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
50 1,1,1-Trichloroethane	97		4.123					
53 Carbon tetrachloride	117		4.253					
52 1,1-Dichloropropene	75		4.253					9
55 Benzene	78	4.431	4.431	0.0	92	275103	1.17	
56 1,2-Dichloroethane	62		4.443					
57 Tert-amyl methyl ether	73		4.526					9
60 Trichloroethene	130	4.964	4.964	0.0	98	1897402	32.8	
62 1,2-Dichloropropane	63		5.154					9
65 Dibromomethane	93		5.249					9
67 Dichlorobromomethane	83		5.391					
69 2-Chloroethyl vinyl ether	63		5.652					9
70 cis-1,3-Dichloropropene	75		5.783					
71 4-Methyl-2-pentanone (MIBK)	43		5.925					9
72 Toluene	91		6.067					
73 trans-1,3-Dichloropropene	75		6.269					9
77 Tetrachloroethene	164	6.553	6.554	-0.001	85	12857	0.2865	
76 1,3-Dichloropropane	76		6.577					9
78 2-Hexanone	43		6.660					
79 Chlorodibromomethane	129		6.779					9
123 Ethylene Dibromide	107		6.874					9
82 Chlorobenzene	112		7.324					
83 1,1,1,2-Tetrachloroethane	131		7.407					9
84 Ethylbenzene	106		7.431					9
10 m-Xylene & p-Xylene	91		7.538					9
85 o-Xylene	106		7.905					9
86 Styrene	104		7.917					
87 Bromoform	173		8.095					9
88 Isopropylbenzene	105	8.261	8.261	0.0	85	107205	0.4702	
91 Bromobenzene	156		8.534					9
90 1,1,2,2-Tetrachloroethane	83		8.546					
92 1,2,3-Trichloropropane	110		8.581					
94 N-Propylbenzene	120		8.652					9
95 2-Chlorotoluene	126		8.724					9
104 4-Chlorotoluene	91		8.830					9
97 tert-Butylbenzene	119		9.127					9
98 1,2,4-Trimethylbenzene	105		9.174					9
99 sec-Butylbenzene	105		9.340					9
100 1,3-Dichlorobenzene	146		9.435					9
101 4-Isopropyltoluene	119		9.483					
102 1,4-Dichlorobenzene	146		9.530					9
103 1,2,3-Trimethylbenzene	105		9.577					9
106 1,2-Dichlorobenzene	146		9.886					
105 n-Butylbenzene	91		9.886					9
107 1,2-Dibromo-3-Chloropropane	157		10.645					
109 1,2,4-Trichlorobenzene	180		11.463					9
110 Hexachlorobutadiene	225		11.641					
111 Naphthalene	128		11.700					
112 1,2,3-Trichlorobenzene	180		11.937					
S 114 Xylenes, Total	106		16.530					

MRC-MW-21B-042213

$\frac{1897402}{1701591\ Int} \times \frac{10\ internal}{6.3397\ Ical} \times 20DF = 656.6\ \frac{ug}{L}$

reported as $660\ \frac{ug}{L}$

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\NCChrom\ChromData\A4HP10\20130429-19353.b\30429023.D		
Lims ID:	240-23530-M-5-A	Client ID:	MRC-MW-21B-042213
Inject. Date:	29-Apr-2013 18:04:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0019353-023	MRC-MW-21B-042213	
Misc. Info.:	240-23530-M-5-A		
Operator:	001710	Instrument ID:	A4HP10
Injection Vol:	1.0 ul	ALS Bottle#:	23
Lims Batch ID:	83926	Lims Sample ID:	23
Detector:	MS SCAN		
Method:	\\NCChrom\ChromData\A4HP10\20130429-19353.b\8270_10.m		
Last Update:	30-Apr-2013 11:38:12	Calib Date:	12-Apr-2013 00:58:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCChrom\ChromData\A4HP10\20130411-18790.b\30411019.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK021		

First Level Reviewer: gruberj Date: 30-Apr-2013 11:35:11

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.894	5.894	0.0	98	164843	4.00	
* 2 Naphthalene-d8	136	7.004	7.010	-0.006	100	645768	4.00	
* 3 Acenaphthene-d10	164	8.509	8.509	0.0	91	376352	4.00	
* 4 Phenanthrene-d10	188	9.778	9.778	0.0	97	634875	4.00	
* 5 Chrysene-d12	240	12.345	12.351	-0.006	81	643534	4.00	
* 6 Perylene-d12	264	14.443	14.449	-0.006	83	484684	4.00	
$ 7 2-Fluorophenol	112	4.648	4.648	0.0	93	480130	10.1	
$ 8 Phenol-d5	99	5.536	5.536	0.0	98	646945	10.2	
$ 9 Nitrobenzene-d5	82	6.376	6.376	0.0	89	400090	6.63	
$ 10 2-Fluorobiphenyl (Surr)	172	7.921	7.921	0.0	100	711371	5.86	
$ 11 2,4,6-Tribromophenol	330	9.178	9.178	0.0	89	134248	9.75	
$ 12 Terphenyl-d14	244	11.141	11.141	0.0	99	705085	5.57	
25 1,4-Dioxane	88	2.480	2.480	0.0	95	415619	17.1	M

QC Flag Legend

Review Flags
M - Manually Integrated

$\frac{415619 Samp}{164843 Int} \times \frac{4 Internal}{0.5910 Ical} \times \frac{2 mL Final}{1 mL Initial} = 34.1 \frac{ug}{L}$

Reported as 34 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\ZPID\20130425-19242.b\Z0042518.D		
Lims ID:	240-23530-E-2	Client ID:	MRC-MW25A-042213
Inject. Date:	25-Apr-2013 13:55:03	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0019242-018		
Misc. Info.:			
Operator:	402582	Instrument ID:	ZPID
Purge Vol:	1.000 mL	ALS Bottle#:	1
Lims Batch ID:	83473	Lims Sample ID:	18
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20130425-19242.b\RSK175.m		
Last Update:	25-Apr-2013 16:23:02	Calib Date:	18-Jan-2013 16:58:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Column Type:		Column Dia:	
Process Host:	XAWRK032		

MRC-MW25A-042213

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	0.908	0.909	-0.001	1196888	10.6	
2 Ethylene						
2		1.409				
4 Ethane						
2		1.683				
$ 5 1,1,1-Trifluoroethane						
2	2.708	2.706	0.002	87592806	2311.0	

$\frac{1196888 \text{ sample}}{112419 \text{ Cal}} = 10.64 \frac{\text{ug}}{\text{L}}$ reported as 11 ug/L

MRC-MW25A-042213

Sample Name: 240-23530-i-2-a Acquired: 4/25/2013 8:23:38 Type: Unk
Method: Standard Method + IEC Checks(v141) Mode: CONC Corr. Factor: 1.000000
User: Roger Method: 6010B/6010C Method: 200.7 :
Comment:

Elem	Ag3280	Al3082	As1890	B_1826	Ba4554	Be3130	Ca3179	Cd2288
IS Ref	(Y_3600)	(Y_3710)	(Y_2243)	(Y_2243)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_2243)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	-.11253	156.96	-.41449	30.404	153.82	2.9008	22553.	.0517
Stddev	.13067	14.13	.20671	.377	.18	.0261	14.	.0665
%RSD	116.12	9.0012	49.871	1.2406	.11769	.89901	.06107	128.8
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Co2286	Cr2677	Cu3273	Fe2599	K_7664	Li6707	Mg2790	Mn2576
IS Ref	(In2306)	(Y_3600)	(Y_3600)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3710)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	90.126	1.7883	-.01573	17993.	2574.1	48.358	6259.6	3232.1
Stddev	.410	.2434	.69192	45.	22.6	.656	14.7	15.3
%RSD	.45486	13.613	4399.6	.25168	.87641	1.3567	.23410	.47275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

Elem	Mo2020	Na5895	Ni2316	Pb2203	Sb2175	Se1960	Sn1899	Ti3372
IS Ref	(Y_2243)	(Y_3710)	(In2306)	(Y_2243)	(Y_2243)	(Y_2243)	(In2306)	(Y_3600)
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	.45202	61546.	126.93	-.61533	-.8829	2.1542	.78813	4.5879
Stddev	.16578	9.	1.08	1.6907	.9869	1.4205	.15082	1.1364
%RSD	36.676	.01518	.84910	274.77	111.8	65.940	19.137	24.768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								
Low Limit								

61546 ug/L reported as 62000 ug/L

PDF created with pdfFactory trial version www.pdffactory.com

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : [illegible]

Client Tetratech Site Name _____

Cooler unpacked by: [signature]

Cooler Received on 4-23-13 Opened on 4-23-13

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   - IR GUN# 1 (CF –0 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   - IR GUN# 4G (CF +1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   - IR GUN# 5G (CF +1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C
   - IR GUN# 8 (CF +1 °C) Observed Cooler Temp._____°C Corrected Cooler Temp._____°C

   ☐ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   - -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - -Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC256691
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: [signature]

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____

were further preserved in Sample Receiving to meet recommended pH level(s). Preservation Lot: Nitric Acid Lot# 100110-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

Time preservative was added to sample(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** _____
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
~~No#~~	~~8~~	~~0.7~~	1.7	ice
No#	1	1-3	2-3	1

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW25A-042213	240-23530-H-2	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW25A-042213	240-23530-I-2	Plastic 250ml - with Nitric Acid	<2		
MRC-MW25A-042213	240-23530-K-2	Plastic 500ml - with Nitric Acid	<2		
MRC-MW61A-042213	240-23530-A-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW61A-042213	240-23530-B-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW61A-042213	240-23530-C-3	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-21A-042213	240-23530-D-4	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-21B-042213	240-23530-H-5	Plastic 250ml - with Sulfuric Acid	<2		
MRC-MW-21B-042213	240-23530-I-5	Plastic 250ml - with Nitric Acid	<2		
MRC-MW-21B-042213	240-23530-K-5	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-22A-042213	240-23530-D-6	Plastic 500ml - with Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23530-1

Login Number: 23530
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 04/24/13 01:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-23384-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW61A-042213	240-23530-3	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW04A-041813	240-23384-2	NM	4/18/2013	4/29/2013	4/29/2013	11	0	11
HG	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	5/1/2013	5/1/2013	9	0	9
HG	UG/L	MRC-MW42A-041813	240-23384-3	NM	4/18/2013	4/29/2013	4/29/2013	11	0	11
HG	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/23/2013	4/25/2013	5	2	7
M	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/24/2013	4/25/2013	2	1	3
M	UG/L	MRC-MW42A-041813	240-23384-3	NM	4/18/2013	4/26/2013	4/30/2013	8	4	12
M	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/24/2013	4/25/2013	2	1	3
M	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/26/2013	4/30/2013	8	4	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW61A-042213	240-23530-3	NM	4/22/2013	4/26/2013	4/30/2013	4	4	8
M	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/23/2013	4	1	5
M	UG/L	MRC-MW04A-041813	240-23384-2	NM	4/18/2013	4/26/2013	4/30/2013	8	4	12
ALK	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/20/2013	4/20/2013	2	0	2
ALK	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ALK	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
CL	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
CL	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
CL	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
DOC	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/24/2013	4/24/2013	2	0	2
DOC	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/24/2013	4/24/2013	2	0	2
DOC	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/23/2013	4/23/2013	5	0	5
NH3	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/25/2013	4/25/2013	7	0	7
NH3	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
NH3	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
NTA	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/19/2013	4/19/2013	1	0	1
NTA	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NTA	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
NTA	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
NTI	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
NTI	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/19/2013	4/19/2013	1	0	1
NTI	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OPO4	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OPO4	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
OPO4	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/19/2013	4/19/2013	1	0	1
PCS	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
PCS	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/25/2013	4/25/2013	7	0	7
PCS	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
SO4	MG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
SO4	MG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/23/2013	4/23/2013	1	0	1
SO4	MG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
OS	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7
OS	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7
OS	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7
OS	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/29/2013	3	4	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW-22A-042213	240-23530-6	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	TB-042213	240-23530-1	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
OV	UG/L	MRC-MW-21A-042213	240-23530-4	NM	4/22/2013	4/29/2013	4/29/2013	7	0	7
ETHA	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHA	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHA	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
ETHE	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
ETHE	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
ETHE	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
METH	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
METH	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
METH	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
OVG	UG/L	MRC-MW03A-041813	240-23384-1	NM	4/18/2013	4/22/2013	4/22/2013	4	0	4
OVG	UG/L	MRC-MW-21B-042213	240-23530-5	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3
OVG	UG/L	MRC-MW25A-042213	240-23530-2	NM	4/22/2013	4/25/2013	4/25/2013	3	0	3

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab File ID: UXC1137.D Lab Sample ID: MB 240-83937/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/29/2013 13:10

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-83937/4	UXC1135.D	04/29/2013 12:25
TB-042213	240-23530-1	UXC1147.D	04/29/2013 17:01
MRC-MW25A-042213	240-23530-2	UXC1148.D	04/29/2013 17:24
MRC-MW-21A-042213	240-23530-4	UXC1149.D	04/29/2013 17:46
MRC-MW-21B-042213	240-23530-5	UXC1150.D	04/29/2013 18:08
MRC-MW-22A-042213	240-23530-6	UXC1151.D	04/29/2013 18:31
	400-74253-A-5 MS	UXC1158.D	04/29/2013 21:06
	400-74253-A-5 MSD	UXC1159.D	04/29/2013 21:29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83937/5

Matrix: Water Lab File ID: UXC1137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83937/5

Matrix: Water Lab File ID: UXC1137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-83937/5

Matrix: Water | Lab File ID: UXC1137.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83937/5

Matrix: Water Lab File ID: UXC1137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1135.D

Lab ID: LCS 240-83937/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.92	99	83-112	
Bromobenzene	10.0	9.13	91	76-115	
Bromochloromethane	10.0	9.85	99	77-120	
Bromodichloromethane	10.0	10.7	107	72-121	
Bromoform	10.0	9.02	90	40-131	
Bromomethane	10.0	7.63	76	11-185	
2-Butanone	20.0	17.9	90	60-126	
Carbon disulfide	10.0	13.8	138	62-142	
Carbon tetrachloride	10.0	9.91	99	66-128	
Chlorobenzene	10.0	9.73	97	85-110	
Chloroethane	10.0	8.60	86	25-153	
2-Chloroethyl vinyl ether	10.0	9.14 J	91	52-131	
Chloroform	10.0	10.2	102	79-117	
Chloromethane	10.0	7.76	78	44-126	
2-Chlorotoluene	10.0	9.55	96	76-116	
4-Chlorotoluene	10.0	9.43	94	77-115	
cis-1,2-Dichloroethene	10.0	10.0	100	80-113	
cis-1,3-Dichloropropene	10.0	8.74	87	61-115	
Dibromochloromethane	10.0	9.08	91	64-119	
1,2-Dibromo-3-Chloropropane	10.0	11.3	113	42-136	
1,2-Dibromoethane	10.0	9.20	92	79-113	
Dibromomethane	10.0	10.1	101	81-120	
1,2-Dichlorobenzene	10.0	9.59	96	81-110	
1,3-Dichlorobenzene	10.0	9.67	97	80-110	
1,4-Dichlorobenzene	10.0	9.23	92	82-110	
Dichlorodifluoromethane	10.0	5.54	55	19-129	
1,1-Dichloroethane	10.0	10.1	101	82-115	
1,2-Dichloroethane	10.0	9.15	92	71-127	
1,1-Dichloroethene	10.0	11.7	117	78-131	
1,2-Dichloropropane	10.0	9.67	97	81-115	
1,3-Dichloropropane	10.0	9.77	98	79-116	
2,2-Dichloropropane	10.0	9.04	90	50-129	
1,1-Dichloropropene	10.0	9.98	100	83-114	
Diisopropyl ether	10.0	9.43	94	77-118	
Ethylbenzene	10.0	10.2	102	83-112	
Hexachlorobutadiene	10.0	8.25	83	36-134	
2-Hexanone	20.0	20.1	100	55-133	
Isopropylbenzene	10.0	10.4	104	75-114	
Methylene Chloride	10.0	10.9	109	66-131	
4-Methyl-2-pentanone	20.0	20.6	103	63-128	
Methyl tert-butyl ether	10.0	9.98	100	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1135.D

Lab ID: LCS 240-83937/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.2	101	83-113	
Naphthalene	10.0	8.41	84	32-141	
n-Butylbenzene	10.0	10.2	102	66-125	
n-Propylbenzene	10.0	10.2	102	74-121	
o-Xylene	10.0	10.5	105	83-113	
p-Isopropyltoluene	10.0	10.4	104	74-120	
sec-Butylbenzene	10.0	10.0	100	70-117	
Styrene	10.0	9.51	95	79-114	
tert-Butyl alcohol	200	224	112	70-130	
tert-Butylbenzene	10.0	10.1	101	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.7	107	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.28	93	68-118	
Tetrachloroethene	10.0	9.33	93	79-114	
Toluene	10.0	9.95	100	84-111	
trans-1,2-Dichloroethene	10.0	10.4	104	83-117	
trans-1,3-Dichloropropene	10.0	8.57	86	58-117	
1,2,3-Trichlorobenzene	10.0	9.37	94	54-126	
1,2,4-Trichlorobenzene	10.0	8.74	87	48-135	
1,1,1-Trichloroethane	10.0	9.54	95	74-118	
Trichloroethene	10.0	9.80	98	76-117	
Trichlorofluoromethane	10.0	8.06	81	49-157	
1,2,3-Trichloropropane	10.0	8.56	86	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.0	120	74-151	
1,2,3-Trimethylbenzene	10.0	9.89	99	70-130	
1,2,4-Trimethylbenzene	10.0	10.0	100	76-120	
Vinyl acetate	10.0	7.47	75	46-161	
Vinyl chloride	10.0	8.32	83	53-127	
Xylenes, Total	30.0	30.7	102	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Not our Sample

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1158.D

Lab ID: 400-74253-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	133	33 U	126	94	33-145	
Benzene	66.7	10	79.3	103	72-121	
Bromobenzene	66.7	6.7 U	51.5	77	71-116	
Bromochloromethane	66.7	6.7 U	68.1	102	73-121	
Bromodichloromethane	66.7	6.7 U	65.3	98	67-120	
Bromoform	66.7	6.7 U	55.5	83	32-128	
Bromomethane	66.7	6.7 U	57.7	86	10-186	
2-Butanone	133	33 U	110	82	54-129	
Carbon disulfide	66.7	6.7 U	95.3	143	57-147	
Carbon tetrachloride	66.7	6.7 U	63.2	95	59-129	
Chlorobenzene	66.7	6.7 U	64.3	96	80-110	
Chloroethane	66.7	6.7 U	67.4	101	21-165	
2-Chloroethyl vinyl ether	66.7	67 U	67 U	0	10-150	F
Chloroform	66.7	6.7 U	67.5	101	76-118	
Chloromethane	66.7	6.7 U	56.2	84	33-132	
2-Chlorotoluene	66.7	6.7 U	57.1	86	69-117	
4-Chlorotoluene	66.7	6.7 U	60.6	91	71-116	
cis-1,2-Dichloroethene	66.7	6.7 U	68.8	103	70-120	
cis-1,3-Dichloropropene	66.7	6.7 U	46.9	70	51-110	
Dibromochloromethane	66.7	6.7 U	54.5	82	56-118	
1,2-Dibromo-3-Chloropropane	66.7	33 U	63.1	95	32-139	
1,2-Dibromoethane	66.7	6.7 U	60.9	91	74-113	
Dibromomethane	66.7	6.7 U	66.5	100	77-121	
1,2-Dichlorobenzene	66.7	6.7 U	63.0	94	75-111	
1,3-Dichlorobenzene	66.7	6.7 U	57.2	86	73-110	
1,4-Dichlorobenzene	66.7	6.7 U	54.9	82	75-110	
Dichlorodifluoromethane	66.7	6.7 U	33.1	50	17-128	
1,1-Dichloroethane	66.7	6.7 U	69.3	104	79-116	
1,2-Dichloroethane	66.7	6.7 U	62.4	93	68-129	
1,1-Dichloroethene	66.7	6.7 U	77.1	116	74-135	
1,2-Dichloropropane	66.7	6.7 U	66.1	99	78-115	
1,3-Dichloropropane	66.7	6.7 U	62.0	93	74-118	
2,2-Dichloropropane	66.7	6.7 U	54.4	82	38-127	
1,1-Dichloropropene	66.7	6.7 U	63.7	96	80-114	
Diisopropyl ether	66.7	33 U	64.3	96	73-118	
Ethylbenzene	66.7	200	294	137	75-116	E F
Hexachlorobutadiene	66.7	6.7 U	48.2	72	27-132	
2-Hexanone	133	33 U	137	103	47-139	
Isopropylbenzene	66.7	36	123	130	68-116	F
Methylene Chloride	66.7	6.7 U	73.5	110	63-128	
4-Methyl-2-pentanone	133	33 U	135	101	56-131	
Methyl tert-butyl ether	66.7	6.7 U	65.5	98	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1158.D

Lab ID: 400-74253-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	133	400	526	94	75-117	
Naphthalene	66.7	82	136	80	15-158	E
n-Butylbenzene	66.7	8.5	74.9	100	56-127	
n-Propylbenzene	66.7	100	150	72	64-124	
o-Xylene	66.7	14	95.8	123	76-116	F
p-Isopropyltoluene	66.7	2.0 J	63.3	92	64-122	
sec-Butylbenzene	66.7	4.3 J	64.4	90	60-119	
Styrene	66.7	6.7 U	67.1	101	71-117	
tert-Butyl alcohol	1330	130 U	1300	97	70-130	
tert-Butylbenzene	66.7	6.7 U	60.5	91	61-119	
1,1,1,2-Tetrachloroethane	66.7	6.7 U	70.1	105	64-118	
1,1,2,2-Tetrachloroethane	66.7	6.7 U	53.0	79	63-122	
Tetrachloroethene	66.7	6.7 U	62.6	94	70-117	
Toluene	66.7	6.7 U	66.7	100	78-114	
trans-1,2-Dichloroethene	66.7	6.7 U	69.0	103	80-119	
trans-1,3-Dichloropropene	66.7	6.7 U	49.2	74	46-116	
1,2,3-Trichlorobenzene	66.7	6.7 U	58.0	87	45-129	
1,2,4-Trichlorobenzene	66.7	6.7 U	62.1	93	38-138	
1,1,1-Trichloroethane	66.7	6.7 U	63.6	95	68-121	
Trichloroethene	66.7	6.7 U	64.2	96	66-120	
Trichlorofluoromethane	66.7	6.7 U	48.4	73	46-157	
1,2,3-Trichloropropane	66.7	6.7 U	49.6	74	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	66.7	6.7 U	75.9	114	70-152	
1,2,3-Trimethylbenzene	66.7	67	130	95	70-130	
1,2,4-Trimethylbenzene	66.7	190	236	74	67-124	
Vinyl acetate	66.7	13 U	53.1	80	43-157	
Vinyl chloride	66.7	6.7 U	59.9	90	49-130	
Xylenes, Total	200	410	622	104	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1159.D

Lab ID: 400-74253-A-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	133	114	85	10	30	33-145	
Benzene	66.7	77.8	101	2	30	72-121	
Bromobenzene	66.7	53.4	80	4	30	71-116	
Bromochloromethane	66.7	63.9	96	6	30	73-121	
Bromodichloromethane	66.7	66.1	99	1	30	67-120	
Bromoform	66.7	57.9	87	4	30	32-128	
Bromomethane	66.7	56.6	85	2	30	10-186	
2-Butanone	133	115	86	5	30	54-129	
Carbon disulfide	66.7	90.5	136	5	30	57-147	
Carbon tetrachloride	66.7	60.6	91	4	30	59-129	
Chlorobenzene	66.7	62.0	93	4	30	80-110	
Chloroethane	66.7	66.3	99	2	30	21-165	
2-Chloroethyl vinyl ether	66.7	67 U	0	NC	30	10-150	F
Chloroform	66.7	65.4	98	3	30	76-118	
Chloromethane	66.7	52.3	78	7	30	33-132	
2-Chlorotoluene	66.7	59.8	90	5	30	69-117	
4-Chlorotoluene	66.7	61.4	92	1	30	71-116	
cis-1,2-Dichloroethene	66.7	66.3	99	4	30	70-120	
cis-1,3-Dichloropropene	66.7	50.2	75	7	30	51-110	
Dibromochloromethane	66.7	53.0	79	3	30	56-118	
1,2-Dibromo-3-Chloropropane	66.7	66.4	100	5	30	32-139	
1,2-Dibromoethane	66.7	61.8	93	1	30	74-113	
Dibromomethane	66.7	66.1	99	1	30	77-121	
1,2-Dichlorobenzene	66.7	63.8	96	1	30	75-111	
1,3-Dichlorobenzene	66.7	58.8	88	3	30	73-110	
1,4-Dichlorobenzene	66.7	56.2	84	2	30	75-110	
Dichlorodifluoromethane	66.7	33.5	50	1	30	17-128	
1,1-Dichloroethane	66.7	68.5	103	1	30	79-116	
1,2-Dichloroethane	66.7	60.4	91	3	30	68-129	
1,1-Dichloroethene	66.7	70.3	105	9	30	74-135	
1,2-Dichloropropane	66.7	65.7	98	1	30	78-115	
1,3-Dichloropropane	66.7	60.5	91	2	30	74-118	
2,2-Dichloropropane	66.7	54.8	82	1	30	38-127	
1,1-Dichloropropene	66.7	61.3	92	4	30	80-114	
Diisopropyl ether	66.7	64.2	96	0	30	73-118	
Ethylbenzene	66.7	284	122	3	30	75-116	E F
Hexachlorobutadiene	66.7	47.3	71	2	30	27-132	
2-Hexanone	133	142	107	4	30	47-139	
Isopropylbenzene	66.7	118	123	3	30	68-116	F
Methylene Chloride	66.7	69.0	104	6	30	63-128	
4-Methyl-2-pentanone	133	130	97	4	30	56-131	
Methyl tert-butyl ether	66.7	65.6	98	0	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1159.D

Lab ID: 400-74253-A-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	133	504	78	4	30	75-117	
Naphthalene	66.7	140	87	3	30	15-158	E
n-Butylbenzene	66.7	74.6	99	0	30	56-127	
n-Propylbenzene	66.7	152	75	1	30	64-124	
o-Xylene	66.7	91.6	117	5	30	76-116	F
p-Isopropyltoluene	66.7	64.9	94	2	30	64-122	
sec-Butylbenzene	66.7	64.6	90	0	30	60-119	
Styrene	66.7	64.7	97	4	30	71-117	
tert-Butyl alcohol	1330	1310	98	1	30	70-130	
tert-Butylbenzene	66.7	60.7	91	0	30	61-119	
1,1,1,2-Tetrachloroethane	66.7	69.0	104	2	30	64-118	
1,1,2,2-Tetrachloroethane	66.7	55.9	84	5	30	63-122	
Tetrachloroethene	66.7	60.0	90	4	30	70-117	
Toluene	66.7	65.8	99	1	30	78-114	
trans-1,2-Dichloroethene	66.7	68.7	103	0	30	80-119	
trans-1,3-Dichloropropene	66.7	50.2	75	2	30	46-116	
1,2,3-Trichlorobenzene	66.7	61.5	92	6	30	45-129	
1,2,4-Trichlorobenzene	66.7	64.4	97	4	30	38-138	
1,1,1-Trichloroethane	66.7	63.8	96	0	30	68-121	
Trichloroethene	66.7	62.1	93	3	30	66-120	
Trichlorofluoromethane	66.7	47.9	72	1	30	46-157	
1,2,3-Trichloropropane	66.7	54.6	82	10	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	66.7	67.6	101	12	30	70-152	
1,2,3-Trimethylbenzene	66.7	130	96	1	30	70-130	
1,2,4-Trimethylbenzene	66.7	241	81	2	30	67-124	
Vinyl acetate	66.7	52.4	79	1	30	43-157	
Vinyl chloride	66.7	56.0	84	7	30	49-130	
Xylenes, Total	200	596	91	4	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042213	240-23530-1	92	93	87	83
MRC-MW25A-042213	240-23530-2	97	100	94	88
MRC-MW-21A-042213	240-23530-4	94	97	90	89
MRC-MW-21B-042213	240-23530-5	96	98	94	91
MRC-MW-22A-042213	240-23530-6	99	100	89	84
	MB 240-83937/5	90	94	89	80
	LCS 240-83937/4	100	91	98	102
	400-74253-A-5 MS	97	86	100	108
	400-74253-A-5 MSD	97	88	100	107

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
Acrolein	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	0.0383	X 0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
Acetonitrile	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		0.0282	X			12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Lin1	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095 0.0103	0.0099	0.0088	0.0098	Ave		0.0097					5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
Tetrahydrofuran	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	0.0478							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
1,4-Dioxane	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	0.0028							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Lin1	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Lin1	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	X 0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-23530-1 | Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 | Calibration End Date: 04/04/2013 16:10 | Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.9601 0.7242	0.9050	0.8719	0.8759	0.8132	Ave		0.8584				9.5		15.0			
Ethyl ether	0.3412 0.2934	0.3226	0.3378	0.3107	0.3010	Ave		0.3178				6.1		15.0			
3-Chloro-1-propene	0.1577 0.1521	0.1355	0.1441	0.1436	0.1526	Ave		0.1476				5.4		15.0			
Diisopropyl ether	0.2710 0.3092	0.2719	0.2883	0.2894	0.3057	Ave		0.2893				5.6		15.0			
2-Chloro-1,3-butadiene	0.5134 0.5286	0.4490	0.5190	0.5156	0.5192	Ave		0.5075				5.7		15.0			
Ethyl-t-butyl ether (ETBE)	0.5996 0.6507	0.6278	0.6422	0.6520	0.6730	Ave		0.6409				3.9		15.0			
Ethyl acetate	0.1671 0.1520	0.1351	0.1372	0.1445	0.1460	Ave		0.1470				7.9		15.0			
Propionitrile	0.0279 0.0276	0.0303	0.0278	0.0267	0.0286	Ave		0.0282				4.4		15.0			
Methacrylonitrile	0.1142 0.1154	0.1292	0.1216	0.1061	0.1151	Ave		0.1169				6.7		15.0			
Isobutyl alcohol	0.0041 0.0040	0.0039	0.0038	0.0045	0.0043	Ave		0.0041				6.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4454 0.5069	0.4734	0.4860	0.4960	0.5048	Ave		0.4854				4.8		15.0			
n-Heptane	0.0775 0.0685	0.0576	0.0627	0.0688	0.0669	Ave		0.0670				10.0		15.0			
n-Butanol	0.0026 0.0025	0.0026	0.0028	0.0029	0.0027	Ave		0.0027				5.4		15.0			
Methyl methacrylate	0.1572 0.1432	0.1218	0.1256	0.1264	0.1350	Ave		0.1349				9.9		15.0			
2-Nitropropane	0.0187 0.0239	0.0191	0.0171	0.0186	0.0192	Ave		0.0194				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0812 0.0946	0.0685	0.0862	0.0895	0.0990	Ave		0.0865				12.0		15.0			
1,2,3-Trimethylbenzene	2.5686 3.4874	2.5916	3.0529	3.0965	3.4820	Ave		3.0465				13.0		15.0			
2-Methylnaphthalene	0.2129 0.6051	0.2387	0.2880	0.4178	0.5799	Qua	-1.627	0.5468	0.0010						0.9970		0.9900
n-Butyl acetate	0.1485 0.2372	0.1744	0.1786	0.2091	0.2206	Lin1	-0.239	0.2320							0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab File ID: BFB119B.D BFB Injection Date: 04/29/2013

Instrument ID: A3UX15 BFB Injection Time: 09:43

Analysis Batch No.: 83937

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.2	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.5	(0.6)1
174	50.0 - 120.00 % of mass 95	86.5	
175	5.0 - 9.0 % of mass 174	6.9	(8.0)1
176	95.0 - 101.0 % of mass 174	85.5	(98.8)1
177	5.0 - 9.0 % of mass 176	6.0	(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-83937/3	UXC1133.D	04/29/2013	11:40
	CCVIS 240-83937/2	UXC1134.D	04/29/2013	12:03
	LCS 240-83937/4	UXC1135.D	04/29/2013	12:25
	MB 240-83937/5	UXC1137.D	04/29/2013	13:10
TB-042213	240-23530-1	UXC1147.D	04/29/2013	17:01
MRC-MW25A-042213	240-23530-2	UXC1148.D	04/29/2013	17:24
MRC-MW-21A-042213	240-23530-4	UXC1149.D	04/29/2013	17:46
MRC-MW-21B-042213	240-23530-5	UXC1150.D	04/29/2013	18:08
MRC-MW-22A-042213	240-23530-6	UXC1151.D	04/29/2013	18:31
	400-74253-A-5 MS	UXC1158.D	04/29/2013	21:06
	400-74253-A-5 MSD	UXC1159.D	04/29/2013	21:29

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCV 240-83937/3 Calibration Date: 04/29/2013 11:40

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC1133.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.8032		2.00	0.0100	-6.4	50.0
Ethyl ether	Ave	0.3178	0.3319		2.00	0.0100	4.4	50.0
3-Chloro-1-propene	Ave	0.1476	0.1599		2.00	0.0100	8.3	50.0
Diisopropyl ether	Ave	0.2893	0.3008		10.0	0.0500	4.0	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.5160		2.00	0.0100	1.7	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6463		5.00	0.0100	0.8	50.0
Ethyl acetate	Ave	0.1470	0.1540		4.00	0.0200	4.8	50.0
Propionitrile	Ave	0.0282	0.0275		4.00	0.0200	-2.4	50.0
Methacrylonitrile	Ave	0.1169	0.1123		2.00	0.0100	-4.0	50.0
Isobutyl alcohol	Ave	0.0041	0.0043		50.0	0.200	4.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.5031		5.00	0.0100	3.6	50.0
n-Heptane	Ave	0.0670	0.0688		1.00	0.0100	2.7	50.0
n-Butanol	Ave	0.0027	0.0027		50.0	0.200	2.6	50.0
Methyl methacrylate	Ave	0.1349	0.1271		2.00	0.0100	-5.8	50.0
2-Nitropropane	Ave	0.0194	0.0271		2.00	0.0200	39.7	50.0
Cyclohexanone	Ave	0.0865	0.0681		20.0	0.100	-21.3	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.269		0.0107	0.0100	7.3	50.0
2-Methylnaphthalene	Qua		0.2155		5.00	0.0200	-46.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCVIS 240-83937/2 Calibration Date: 04/29/2013 12:03

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC1134.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.2916		1.00	0.0100	-25.4	50.0
Chloromethane	Ave	0.5133	0.4385	0.1000	1.00	0.0100	-14.6	50.0
Vinyl chloride	Ave	0.5765	0.5239		1.00	0.0100	-9.1	20.0
Bromomethane	Ave	0.3951	0.3731		1.00	0.0100	-5.6	50.0
Chloroethane	Ave	0.3438	0.3379		1.00	0.0100	-1.7	50.0
Trichlorofluoromethane	Ave	0.5693	0.5012		1.00	0.0100	-12.0	50.0
Acrolein	Qua		0.0264		20.0	0.100	-33.1	50.0
1,1-Dichloroethene	Ave	0.3445	0.3621		1.00	0.0100	5.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.2727		1.00	0.0100	3.7	50.0
Acetone	Qua		0.0715		10.0	0.0200	-5.0	50.0
Iodomethane	Ave	0.4958	0.5247		1.00	0.0100	5.8	50.0
Carbon disulfide	Ave	0.7463	0.9252		1.00	0.0100	24.0	50.0
Acetonitrile	Ave	0.0282	0.0292		20.0	0.100	3.6	50.0
Methyl acetate	Ave	0.1586	0.1457		10.0	0.0200	-8.1	50.0
Methylene Chloride	Lin1		0.3743		1.00	0.0100	-3.2	50.0
tert-Butyl alcohol	Ave	0.0097	0.0094		50.0	0.200	-2.6	50.0
Acrylonitrile	Ave	0.0871	0.0883		20.0	0.0200	1.3	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3390		1.00	0.0100	-5.0	50.0
Methyl tert-butyl ether	Ave	0.6313	0.5864		1.00	0.0100	-7.1	50.0
Hexane	Ave	0.0668	0.0627		1.00	0.0100	-6.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.5408	0.1000	1.00	0.0100	-5.9	50.0
Vinyl acetate	Ave	0.0383	0.0380		2.00	0.0100	-0.6	50.0
2,2-Dichloropropane	Ave	0.2770	0.2491		1.00	0.0100	-10.1	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.3582		1.00	0.0100	-5.0	50.0
2-Butanone	Ave	0.0910	0.0896		10.0	0.0200	-1.5	50.0
Bromochloromethane	Ave	0.1662	0.1532		1.00	0.0100	-7.8	50.0
Tetrahydrofuran	Lin1		0.0424		5.00	0.0100	-16.0	50.0
Chloroform	Ave	0.5671	0.5193		1.00	0.0100	-8.4	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4012		1.00	0.0100	-2.6	50.0
Cyclohexane	Ave	0.5423	0.5200		1.00	0.0100	-4.1	50.0
1,1-Dichloropropene	Ave	0.4381	0.3974		1.00	0.0100	-9.3	50.0
Carbon tetrachloride	Ave	0.3243	0.3027		1.00	0.0100	-6.7	50.0
Benzene	Ave	1.387	1.242		1.00	0.0100	-10.5	50.0
1,2-Dichloroethane	Ave	0.4040	0.3272		1.00	0.0100	-19.0	50.0
Trichloroethene	Ave	0.3397	0.3064		1.00	0.0100	-9.8	50.0
Methylcyclohexane	Ave	0.5006	0.4957		1.00	0.0100	-1.0	50.0
1,2-Dichloropropane	Ave	0.3010	0.2643		1.00	0.0100	-12.2	20.0
Dibromomethane	Ave	0.1618	0.1478		1.00	0.0100	-8.6	50.0
1,4-Dioxane	Lin1		0.0019		50.0	0.500	-27.0	50.0
Bromodichloromethane	Ave	0.3013	0.2786		1.00	0.0100	-7.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCVIS 240-83937/2 Calibration Date: 04/29/2013 12:03

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC1134.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1102		10.0	0.0200	-7.6	50.0
cis-1,3-Dichloropropene	Lin1		0.2746		1.00	0.0100	-22.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1718		10.0	0.0200	12.1	50.0
Toluene	Ave	2.028	1.866		1.00	0.0100	-8.0	20.0
trans-1,3-Dichloropropene	Lin1		0.3069		1.00	0.0100	-24.6	50.0
Ethyl methacrylate	Lin1		0.3480		1.00	0.0100	-8.3	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.2777		1.00	0.0100	-14.1	50.0
Tetrachloroethene	Ave	0.3905	0.3620		1.00	0.0100	-7.3	50.0
1,3-Dichloropropane	Ave	0.5899	0.5253		1.00	0.0100	-10.9	50.0
2-Hexanone	Ave	0.1436	0.1655		10.0	0.0200	15.2	50.0
Dibromochloromethane	Lin1		0.2675		1.00	0.0100	-13.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.2854		1.00	0.0100	-6.4	50.0
Chlorobenzene	Ave	1.276	1.157	0.3000	1.00	0.0100	-9.3	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3674		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.6252		1.00	0.0100	-6.7	20.0
m-Xylene & p-Xylene	Ave	1.626	1.588		2.00	0.0200	-2.3	50.0
o-Xylene	Ave	0.8173	0.8080		1.00	0.0100	-1.1	50.0
Styrene	Lin1		1.243		1.00	0.0100	-14.0	50.0
Bromoform	Lin1		0.1402	0.1000	1.00	0.0100	-10.3	50.0
Isopropylbenzene	Ave	1.984	1.987		1.00	0.0100	0.1	50.0
Bromobenzene	Ave	0.9263	0.7701		1.00	0.0100	-16.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6053	0.3000	1.00	0.0100	-12.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1754		1.00	0.0100	-20.5	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0408	X	1.00	0.0100	-38.1	X 50.0
n-Propylbenzene	Ave	0.9249	0.8381		1.00	0.0100	-9.4	50.0
2-Chlorotoluene	Ave	0.8847	0.7709		1.00	0.0100	-12.9	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.571		1.00	0.0100	-5.8	50.0
4-Chlorotoluene	Ave	2.918	2.487		1.00	0.0100	-14.8	50.0
tert-Butylbenzene	Ave	2.268	2.146		1.00	0.0100	-5.4	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.615		1.00	0.0100	-8.3	50.0
sec-Butylbenzene	Ave	3.298	3.137		1.00	0.0100	-4.9	50.0
1,3-Dichlorobenzene	Ave	1.741	1.533		1.00	0.0100	-11.9	50.0
p-Isopropyltoluene	Ave	2.821	2.669		1.00	0.0100	-5.4	50.0
1,4-Dichlorobenzene	Ave	1.894	1.620		1.00	0.0100	-14.5	50.0
1,2-Dichlorobenzene	Ave	1.674	1.510		1.00	0.0100	-9.8	50.0
n-Butylbenzene	Ave	2.489	2.291		1.00	0.0100	-7.9	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0665		2.00	0.0100	-2.9	50.0
1,3,5-Trichlorobenzene	Ave	1.071	0.9847		1.00	0.0100	-8.0	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.6595		1.00	0.0100	-12.6	50.0
Hexachlorobutadiene	Ave	0.5612	0.4486		1.00	0.0100	-20.1	50.0
Naphthalene	Lin1		1.188		1.00	0.0100	-22.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCVIS 240-83937/2 Calibration Date: 04/29/2013 12:03

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC1134.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.5536		1.00	0.0100	-15.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2903		0.00887	0.00890	-0.4	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2893		0.00823	0.00890	-7.5	50.0
Toluene-d8 (Surr)	Ave	1.667	1.689		0.00902	0.00890	1.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5186		0.00890	0.00890	-0.0	50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-83937/2		2005027	4.66	1277367	7.30	809279	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: CCVIS 240-83937/2 Date Analyzed: 04/29/2013 12:03

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC1134.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2005027	4.66	1277367	7.30	809279	9.51
UPPER LIMIT		4010054	5.16	2554734	7.80	1618558	10.01
LOWER LIMIT		1002514	4.16	638684	6.80	404640	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-83937/3		2147683	4.66	1380160	7.30	664934	9.51
LCS 240-83937/4		2024199	4.66	1375675	7.30	849905	9.51
MB 240-83937/5		2014551	4.66	1383425	7.30	644007	9.51
240-23530-1	TB-042213	1953287	4.66	1319058	7.30	630455	9.51
240-23530-2	MRC-MW25A-042213	1718296	4.66	1182743	7.30	568886	9.51
240-23530-4	MRC-MW-21A-042213	1746080	4.66	1191410	7.30	562649	9.51
240-23530-5	MRC-MW-21B-042213	1701591	4.66	1149174	7.30	578239	9.51
240-23530-6	MRC-MW-22A-042213	1697082	4.66	1178284	7.30	567788	9.51
400-74253-A-5 MS		1742255	4.66	1133920	7.30	859011	9.51
400-74253-A-5 MSD		1906923	4.66	1244391	7.30	884599	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/04/2013 11:03

Analysis Batch Number: 80603 End Date: 04/04/2013 22:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-80603/1		04/04/2013 11:03	1	BFB102C.D	DB-624 0.18(mm)
STD8260 240-80603/2 IC		04/04/2013 12:03	1	UXC0373A.D	DB-624 0.18(mm)
STD8260 240-80603/3 IC		04/04/2013 12:26	1	UXC0374.D	DB-624 0.18(mm)
STD8260 240-80603/4 ICIS		04/04/2013 12:49	1	UXC0375.D	DB-624 0.18(mm)
STD8260 240-80603/5 IC		04/04/2013 13:11	1	UXC0376.D	DB-624 0.18(mm)
STD8260 240-80603/6 IC		04/04/2013 13:33	1	UXC0377.D	DB-624 0.18(mm)
STD8260 240-80603/7 IC		04/04/2013 13:56	1	UXC0378.D	DB-624 0.18(mm)
STD 240-80603/8 IC		04/04/2013 14:18	1	UXC0379.D	DB-624 0.18(mm)
STD 240-80603/9 IC		04/04/2013 14:41	1	UXC0380.D	DB-624 0.18(mm)
STD 240-80603/10 IC		04/04/2013 15:03	1	UXC0381.D	DB-624 0.18(mm)
STD 240-80603/11 IC		04/04/2013 15:25	1	UXC0382.D	DB-624 0.18(mm)
STD 240-80603/12 IC		04/04/2013 15:47	1	UXC0383.D	DB-624 0.18(mm)
STD 240-80603/13 IC		04/04/2013 16:10	1	UXC0384.D	DB-624 0.18(mm)
ICV 240-80603/14		04/04/2013 16:32	1	UXC0385.D	DB-624 0.18(mm)
ZZZZZ		04/04/2013 16:54	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 17:16	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:01	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:23	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:45	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:08	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:30	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:52	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:15	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:37	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:59	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:21	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:44	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:06	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:28	1		DB-624 0.18(mm)
LODV 240-80603/31		04/04/2013 22:51	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/29/2013 09:43

Analysis Batch Number: 83937 End Date: 04/29/2013 21:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-83937/1		04/29/2013 09:43	1	BFB119B.D	DB-624 0.18(mm)
CCV 240-83937/3		04/29/2013 11:40	1	UXC1133.D	DB-624 0.18(mm)
CCVIS 240-83937/2		04/29/2013 12:03	1	UXC1134.D	DB-624 0.18(mm)
LCS 240-83937/4		04/29/2013 12:25	1	UXC1135.D	DB-624 0.18(mm)
MB 240-83937/5		04/29/2013 13:10	1	UXC1137.D	DB-624 0.18(mm)
ZZZZZ		04/29/2013 13:39	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 14:01	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 14:23	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 14:46	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 15:08	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 15:31	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 15:53	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 16:16	6.67		DB-624 0.18(mm)
240-23530-1	TB-042213	04/29/2013 17:01	1	UXC1147.D	DB-624 0.18(mm)
240-23530-2	MRC-MW25A-042213	04/29/2013 17:24	7.69	UXC1148.D	DB-624 0.18(mm)
240-23530-4	MRC-MW-21A-042213	04/29/2013 17:46	1	UXC1149.D	DB-624 0.18(mm)
240-23530-5	MRC-MW-21B-042213	04/29/2013 18:08	20	UXC1150.D	DB-624 0.18(mm)
240-23530-6	MRC-MW-22A-042213	04/29/2013 18:31	1	UXC1151.D	DB-624 0.18(mm)
ZZZZZ		04/29/2013 18:53	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 19:15	2		DB-624 0.18(mm)
ZZZZZ		04/29/2013 19:37	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 20:00	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 20:22	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 20:44	1		DB-624 0.18(mm)
400-74253-A-5 MS		04/29/2013 21:06	6.67	UXC1158.D	DB-624 0.18(mm)
400-74253-A-5 MSD		04/29/2013 21:29	6.67	UXC1159.D	DB-624 0.18(mm)

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab File ID: 30429003.D Lab Sample ID: MB 240-83555/12-A

Matrix: Water Date Extracted: 04/25/2013 10:37

Instrument ID: A4HP10 Date Analyzed: 04/29/2013 10:11

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-83555/13-A	30429004.D	04/29/2013 10:35
MRC-MW-21B-042213	240-23530-5	30429023.D	04/29/2013 18:04
MRC-MW-22A-042213	240-23530-6	30429024.D	04/29/2013 18:28
MRC-MW25A-042213	240-23530-2	30429029.D	04/29/2013 20:26
MRC-MW-21A-042213	240-23530-4	30429030.D	04/29/2013 20:50

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-83555/12-A

Matrix: Water | Lab File ID: 30429003.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1000(mL) | Date Analyzed: 04/29/2013 10:11

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	71		20-110
367-12-4	2-Fluorophenol (Surr)	82		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	78		21-110
4165-62-2	Phenol-d5 (Surr)	81		21-110
1718-51-0	Terphenyl-d14 (Surr)	65		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30429004.D

Lab ID: LCS 240-83555/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	13.1	65	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW25A-042213	240-23530-2	67	68	66	59	68	54
MRC-MW-21A-042213	240-23530-4	71	70	71	62	71	47
MRC-MW-21B-042213	240-23530-5	67	68	66	59	65	56
MRC-MW-22A-042213	240-23530-6	59	59	59	54	58	50
	MB 240-83555/12-A	82	81	78	71	65	65
	LCS 240-83555/13-A	81	79	78	69	71	58

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab File ID: 30411001.D DFTPP Injection Date: 04/11/2013

Instrument ID: A4HP10 DFTPP Injection Time: 17:39

Analysis Batch No.: 81611

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	44.0	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	48.3	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.2	
441	Present, but less than mass 443	10.1	
442	40.0 - 110.0% of mass 198	49.1	
443	15.0 - 24.0% of mass 442	10.2	(20.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-81611/2	30411002.D	04/11/2013	18:04
	STD4 240-81611/3	30411003.D	04/11/2013	18:28
	STD3 240-81611/4	30411004.D	04/11/2013	18:53
	STD2 240-81611/5	30411005.D	04/11/2013	19:17
	STD1 240-81611/6	30411006.D	04/11/2013	19:41
	STD9 240-81611/7	30411007.D	04/11/2013	20:06
	STD8 240-81611/8	30411008.D	04/11/2013	20:30
	STD7 240-81611/9	30411009.D	04/11/2013	20:54
	STD6 240-81611/10	30411010.D	04/11/2013	21:19
	ICV 240-81611/11	30411011.D	04/11/2013	21:43

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-23530-1 | Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 | Calibration End Date: 04/11/2013 21:19 | Calibration ID: 14467

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81611/6	30411006.D
Level 2	STD2 240-81611/5	30411005.D
Level 3	STD3 240-81611/4	30411004.D
Level 4	STD4 240-81611/3	30411003.D
Level 5	STD5 240-81611/2	30411002.D
Level 6	STD6 240-81611/10	30411010.D
Level 7	STD7 240-81611/9	30411009.D
Level 8	STD8 240-81611/8	30411008.D
Level 9	STD9 240-81611/7	30411007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5077	0.8345 0.5355	0.6096 0.5712	0.5723 0.5485	0.5484	Ave		0.5910				17.0		20.0			
N-Nitrosodimethylamine	0.6705	0.6142 0.7240	0.5757 0.7721	0.5872 0.7488	0.6419	Ave		0.6668				11.0		20.0			
Pyridine	1.2317	1.1026 1.2779	1.1852 1.4178	1.1447 1.3639	1.1702	Ave		1.2367				8.9		20.0			
Benzaldehyde	1.1249 1.0449	1.0583 1.0812	1.0682 1.1599	1.0922 1.0807	1.0839	Ave		1.0882			0.0100	3.2		20.0			
Phenol	1.4667	1.5399 1.5218	1.4167 1.6495	1.4394 1.6083	1.4943	Ave		1.5171			0.8000	5.3		20.0			
Aniline	1.8148	1.7784 1.9149	1.7438 2.0710	1.7565 2.0147	1.8540	Ave		1.8685				6.5		20.0			
Bis(2-chloroethyl)ether	1.1033	1.2234 1.1759	1.1542 1.2689	1.1207 1.2266	1.1205	Ave		1.1742			0.7000	5.1		20.0			
2-Chlorophenol	1.1629	1.2275 1.2455	1.1526 1.3481	1.1518 1.2918	1.2072	Ave		1.2234			0.8000	5.8		20.0			
1,3-Dichlorobenzene	1.2781	1.2588 1.3219	1.2627 1.4607	1.2751 1.3977	1.3248	Ave		1.3225				5.5		20.0			
1,4-Dichlorobenzene	1.3065	1.3310 1.3551	1.3000 1.4638	1.2381 1.4277	1.3723	Ave		1.3493				5.4		20.0			
Benzyl alcohol	0.7618	0.7103 0.7799	0.7415 0.8771	0.7511 0.8324	0.7602	Ave		0.7768				6.9		20.0			
1,2-Dichlorobenzene	1.2420	1.2455 1.2772	1.3006 1.3837	1.2478 1.3461	1.2559	Ave		1.2873				4.1		20.0			
2-Methylphenol	1.0801	1.0155 1.1189	1.0441 1.2414	1.0430 1.1821	1.1117	Ave		1.1046			0.7000	6.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab File ID: 30429001.D DFTPP Injection Date: 04/29/2013

Instrument ID: A4HP10 DFTPP Injection Time: 09:24

Analysis Batch No.: 83926

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	41.1	
68	Less than 2.0% of mass 69	0.6	(1.3)1
69	Mass 69 relative abundance	44.7	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	51.1	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	22.1	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	11.0	
442	40.0 - 110.0% of mass 198	67.6	
443	15.0 - 24.0% of mass 442	13.0	(19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-83926/2	30429002.D	04/29/2013	09:48
	MB 240-83555/12-A	30429003.D	04/29/2013	10:11
	LCS 240-83555/13-A	30429004.D	04/29/2013	10:35
MRC-MW-21B-042213	240-23530-5	30429023.D	04/29/2013	18:04
MRC-MW-22A-042213	240-23530-6	30429024.D	04/29/2013	18:28
MRC-MW25A-042213	240-23530-2	30429029.D	04/29/2013	20:26
MRC-MW-21A-042213	240-23530-4	30429030.D	04/29/2013	20:50

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCVIS 240-83926/2 Calibration Date: 04/29/2013 09:48

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30429002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5280		8.93	10.0	-10.7	20.0
N-Nitrosodimethylamine	Ave	0.6668	0.6754		10.1	10.0	1.3	20.0
Pyridine	Ave	1.237	1.308		10.6	10.0	5.8	20.0
Benzaldehyde	Ave	1.088	1.013	0.0100	18.6	20.0	-6.9	20.0
Phenol	Ave	1.517	1.490	0.8000	9.82	10.0	-1.8	20.0
Aniline	Ave	1.869	1.841		9.85	10.0	-1.5	20.0
Bis(2-chloroethyl)ether	Ave	1.174	1.183	0.7000	10.1	10.0	0.7	20.0
2-Chlorophenol	Ave	1.223	1.171	0.8000	9.57	10.0	-4.3	20.0
1,3-Dichlorobenzene	Ave	1.322	1.312		9.92	10.0	-0.8	20.0
1,4-Dichlorobenzene	Ave	1.349	1.346		9.98	10.0	-0.2	20.0
Benzyl alcohol	Ave	0.7768	0.7252		9.34	10.0	-6.6	20.0
1,2-Dichlorobenzene	Ave	1.287	1.245		9.67	10.0	-3.3	20.0
2-Methylphenol	Ave	1.105	1.047	0.7000	9.48	10.0	-5.2	20.0
bis (2-chloroisopropyl) ether	Ave	1.795	1.628		9.07	10.0	-9.3	20.0
Indene	Ave	2.278	2.192		19.2	20.0	-3.8	20.0
3 & 4 Methylphenol	Ave	1.151	1.102		9.58	10.0	-4.2	20.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.7860	0.5000	9.54	10.0	-4.6	20.0
Acetophenone	Ave	1.716	1.633	0.0100	9.51	10.0	-4.9	20.0
Hexachloroethane	Ave	0.5215	0.5191	0.3000	9.95	10.0	-0.5	20.0
Nitrobenzene	Ave	0.3401	0.3515	0.2000	10.3	10.0	3.4	20.0
Isophorone	Ave	0.6103	0.6215	0.4000	10.2	10.0	1.8	20.0
2-Nitrophenol	Ave	0.1624	0.1615	0.1000	9.95	10.0	-0.5	20.0
2,4-Dimethylphenol	Ave	0.3114	0.2962	0.2000	9.51	10.0	-4.9	20.0
Benzoic acid	Lin		0.1833		18.7	20.0	-6.4	20.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3787	0.3000	10.5	10.0	5.4	20.0
2,4-Dichlorophenol	Ave	0.2560	0.2571	0.2000	10.0	10.0	0.4	20.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.2823		9.41	10.0	-5.9	20.0
Naphthalene	Ave	0.9279	0.8962	0.7000	9.66	10.0	-3.4	20.0
4-Chloroaniline	Ave	0.3867	0.3904	0.0100	10.1	10.0	0.9	20.0
Hexachlorobutadiene	Ave	0.1834	0.1667	0.0100	9.09	10.0	-9.1	20.0
Caprolactam	Ave	0.0877	0.0972	0.0100	22.2	20.0	10.8	20.0
4-Chloro-3-methylphenol	Ave	0.2736	0.2539	0.2000	9.28	10.0	-7.2	20.0
2-Methylnaphthalene	Ave	0.6242	0.6078	0.4000	9.74	10.0	-2.6	20.0
1-Methylnaphthalene	Ave	0.5854	0.5581		9.53	10.0	-4.7	20.0
Hexachlorocyclopentadiene	Ave	0.3175	0.2463	0.0500	7.76	10.0	-22.4*	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.4653	0.0100	8.76	10.0	-12.4	20.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3122	0.2000	9.46	10.0	-5.4	20.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3210	0.2000	9.38	10.0	-6.2	20.0
1,1'-Biphenyl	Ave	1.293	1.171	0.0100	9.06	10.0	-9.4	20.0
2-Chloronaphthalene	Ave	0.9841	0.9431	0.8000	9.58	10.0	-4.2	20.0

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		186412	5.95	710480	7.06	434356	8.57
UPPER LIMIT		372824	6.45	1420960	7.56	868712	9.07
LOWER LIMIT		93206	5.45	355240	6.56	217178	8.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		174408	5.95	682302	7.06	409364	8.57
CCVIS 240-83926/2		176773	5.89	666249	7.01	410924	8.51

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		809912	9.84	883495	12.45	695044	14.57
UPPER LIMIT		1619824	10.34	1766990	12.95	1390088	15.07
LOWER LIMIT		404956	9.34	441748	11.95	347522	14.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		751682	9.84	793717	12.45	637005	14.57
CCVIS 240-83926/2		684730	9.78	712125	12.35	510404	14.45

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: CCVIS 240-83926/2 Date Analyzed: 04/29/2013 09:48

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30429002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		176773	5.89	666249	7.01	410924	8.51
UPPER LIMIT		353546	6.39	1332498	7.51	821848	9.01
LOWER LIMIT		88387	5.39	333125	6.51	205462	8.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-83555/12-A		141077	5.89	563650	7.01	319732	8.51
LCS 240-83555/13-A		150729	5.89	586678	7.01	358708	8.51
240-23530-5	MRC-MW-21B-042213	164843	5.89	645768	7.00	376352	8.51
240-23530-6	MRC-MW-22A-042213	166710	5.89	630135	7.01	370463	8.51
240-23530-2	MRC-MW25A-042213	177092	5.89	711177	7.01	408978	8.51
240-23530-4	MRC-MW-21A-042213	171880	5.89	660234	7.01	400631	8.51

DCB = 1,4-Dichlorobenzene-d4

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

NPT = Naphthalene-d8

Area Limit = 50%-200% of internal standard area

ANT = Acenaphthene-d10

RT Limit = ± 0.5 minutes of internal standard RT

ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: CCVIS 240-83926/2 Date Analyzed: 04/29/2013 09:48

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30429002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		684730	9.78	712125	12.35	510404	14.45
UPPER LIMIT		1369460	10.28	1424250	12.85	1020808	14.95
LOWER LIMIT		342365	9.28	356063	11.85	255202	13.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-83555/12-A		532922	9.78	533007	12.35	402130	14.44
LCS 240-83555/13-A		591656	9.78	635627	12.35	467902	14.44
240-23530-5	MRC-MW-21B-042213	634875	9.78	643534	12.35	484684	14.44
240-23530-6	MRC-MW-22A-042213	614974	9.78	639917	12.35	482227	14.44
240-23530-2	MRC-MW25A-042213	695654	9.78	711971	12.35	549558	14.44
240-23530-4	MRC-MW-21A-042213	700230	9.78	741581	12.35	596239	14.45

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

PRY = Perylene-d12

PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: MB 240-83473/4

Matrix: Water Date Extracted:

Lab File ID:(1) Z0042504.D Lab File ID:(2)

Date Analyzed:(1) 04/25/2013 11:03 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-83473/5	04/25/2013 11:16	
MRC-MW25A-042213	240-23530-2	04/25/2013 13:55	
MRC-MW-21B-042213	240-23530-5	04/25/2013 14:07	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83473/4

Matrix: Water Lab File ID: Z0042504.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 04/25/2013 11:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83473 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.50	U	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	112		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0042505.D

Lab ID: LCS 240-83473/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	200	98	64-130	
Ethane	218	210	96	77-127	
Methane	116	102	88	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW25A-042213	240-23530-2	88
MRC-MW-21B-042213	240-23530-5	95
	MB 240-83473/4	112
	LCS 240-83473/5	104

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23530-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCV 240-83473/16 Calibration Date: 04/25/2013 13:30

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042516.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	96133		99.0	116	-14.5	30.0
Ethene	Ave	94091	82600		178	203	-12.2	30.0
Acetylene	Ave	27012	29083		202	188	7.7	30.0
Ethane	Ave	102982	92565		196	218	-10.1	30.0
Propene	Ave	85073	71137		255	305	-16.4	30.0
Propane	Ave	101861	89408		280	319	-12.2	30.0
Propane, 2-methyl	Ave	100175	88273		370	420	-11.9	30.0
1,1,1-Trifluoroethane	Ave	37902	37776		2430	2440	-0.3	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCV 240-83473/16 Calibration Date: 04/25/2013 13:30

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042516.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCVRT 240-83473/3 Calibration Date: 04/25/2013 10:51

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042503.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	100407		103	116	-10.7	30.0
Ethene	Ave	94091	90291		195	203	-4.0	30.0
Acetylene	Ave	27012	29635		206	188	9.7	30.0
Ethane	Ave	102982	95956		203	218	-6.8	30.0
Propene	Ave	85073	78324		280	305	-7.9	30.0
Propane	Ave	101861	91660		287	319	-10.0	30.0
Propane, 2-methyl	Ave	100175	89453		375	420	-10.7	30.0
1,1,1-Trifluoroethane	Ave	37902	41533		2670	2440	9.6	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCVRT 240-83473/3 Calibration Date: 04/25/2013 10:51

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042503.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCV 240-83473/10 Calibration Date: 04/25/2013 12:17

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042510.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	90355		93.0	116	-19.6	30.0
Ethene	Ave	94091	78730		170	203	-16.3	30.0
Acetylene	Ave	27012	27918		194	188	3.4	30.0
Ethane	Ave	102982	86942		184	218	-15.6	30.0
Propene	Ave	85073	67951		243	305	-20.1	30.0
Propane	Ave	101861	83609		262	319	-17.9	30.0
Propane, 2-methyl	Ave	100175	82146		345	420	-18.0	30.0
1,1,1-Trifluoroethane	Ave	37902	35969		2310	2440	-5.1	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: CCV 240-83473/10 Calibration Date: 04/25/2013 12:17

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0042510.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Sample No.: CCVRT 240-83473/3 Date Analyzed: 04/25/2013 10:51

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0042503.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.71		
UPPER LIMIT				2.76		
LOWER LIMIT				2.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-83473/3		04/25/2013 10:51	Z0042503.D	2.71		
MB 240-83473/4		04/25/2013 11:03	Z0042504.D	2.71		
LCS 240-83473/5		04/25/2013 11:16	Z0042505.D	2.71		
CCV 240-83473/10		04/25/2013 12:17	Z0042510.D	2.71		
CCV 240-83473/16		04/25/2013 13:30	Z0042516.D	2.71		
240-23530-2	MRC-MW25A-042213	04/25/2013 13:55	Z0042518.D	2.71		
240-23530-5	MRC-MW-21B-042213	04/25/2013 14:07	Z0042519.D	2.71		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-23530-1

SDG No.:

Instrument ID: I9 Date: 04/04/2013 11:44

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23530-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-101603/1-A	05/01/2013 11:50	101603		20	20
LCS 440-101603/2-A	05/01/2013 11:50	101603		20	20
440-44777-E-2-E MS	05/01/2013 11:50	101603		20	20
440-44777-E-2-F MSD	05/01/2013 11:50	101603		20	20
240-23530-2	05/01/2013 11:50	101603		20	20
240-23530-3	05/01/2013 11:50	101603		20	20
240-23530-3 DU	05/01/2013 11:50	101603		20	20
240-23530-3 MS	05/01/2013 11:50	101603		20	20
240-23530-4	05/01/2013 11:50	101603		20	20
240-23530-5	05/01/2013 11:50	101603		20	20
240-23530-6	05/01/2013 11:50	101603		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-101603/1-A

Instrument Code: CV-HG3 Batch No.: 101713

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW61A-042213 MS
Lab ID: 240-23530-3 MS
Lab Name: TestAmerica Irvine
Job No.: 240-23530-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.58		0.20	U	8.00	107	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-44777-E-2-E MS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.38		0.20	U	8.00	105	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-44777-E-2-F MSD

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.33		8.00	104	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: MRC-MW61A-042213 DU Lab ID: 240-23530-3 DU

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-101603/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.46		106	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-83298/1-A	04/24/2013 08:58	83298		50	50
LCS 240-83298/2-A	04/24/2013 08:58	83298		50	50
240-23530-5	04/24/2013 08:58	83298		50	50
240-23530-5 MS	04/24/2013 08:58	83298		50	50
240-23530-5 MSD	04/24/2013 08:58	83298		50	50
240-23530-2	04/24/2013 08:58	83298		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-83298/1-A

Instrument Code: I9 Batch No.: 83643

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	5000	U		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	5000	U		6010C
7439-96-5	Manganese	15	U		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	1100	U		6010C

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-21B-042213 MS
Lab ID: 240-23530-5 MS
Lab Name: TestAmerica Canton
Job No.: 240-23530-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	57300		6600		50000	101	75-125		6010C
Iron	32100		31000		1000	87	75-125	4	6010C
Potassium	52100		2600	J	50000	99	75-125		6010C
Magnesium	56800		6700		50000	100	75-125		6010C
Manganese	3540		3100		500	88	75-125	4	6010C
Sodium	63600		14000		50000	100	75-125		6010C
SiO2, Silica	17200		15000		2140	117	75-125	4	6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-21B-042213 MSD | Lab ID: 240-23530-5 MSD

Lab Name: TestAmerica Canton | Job No.: 240-23530-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	56300		50000	99	75-125	2	20		6010C
Iron	30600		1000	-57 J	75-125	5	20	4	6010C
Potassium	51500		50000	98	75-125	1	20		6010C
Magnesium	55800		50000	98	75-125	2	20		6010C
Manganese	3410		500	64	75-125	4	20	4	6010C
Sodium	62300		50000	97	75-125	2	20		6010C
SiO2, Silica	16500		2140	83	75-125	4	20	4	6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-83298/2-A

Lab Name: TestÁmerica Canton Job No.: 240-23530-1

Sample Matrix: Water LCS Source: MTICP2A_00025

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	50900		102	80	120		6010C
Iron	1000	1010		101	80	120		6010C
Potassium	50000	49800		100	80	120		6010C
Magnesium	50000	50400		101	80	120		6010C
Manganese	500	512		102	80	120		6010C
Sodium	50000	50400		101	80	120		6010C
SiO2, Silica	2140	2230		104	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23530-5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-23530-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	6600		6780	J	2.3		6010C
Iron	31000		32000		2.5		6010C
Potassium	2600	J	2790	J	NC		6010C
Magnesium	6700		6840	J	2.3		6010C
Manganese	3100		3210		3.6		6010C
Sodium	14000		13900	J	NC		6010C
SiO2, Silica	15000		14700		0.003		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100766/1-A	04/26/2013 14:32	100766		50	50
LCS 440-100766/2-A	04/26/2013 14:32	100766		50	50
240-23530-3	04/26/2013 14:32	100766		50	50
240-23530-3 MS	04/26/2013 14:32	100766		50	50
240-23530-3 MSD	04/26/2013 14:32	100766		50	50
240-23530-2	04/26/2013 14:32	100766		50	50
240-23530-4	04/26/2013 14:32	100766		50	50
240-23530-5	04/26/2013 14:32	100766		50	50
240-23530-6	04/26/2013 14:32	100766		50	50

FORM XII-IN

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100766/1-A

Instrument Code: ICPMS4 Batch No.: 101391

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.503	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	1.43	J		6020
7440-62-2	Vanadium	20	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW61A-042213 MS
Lab ID: 240-23530-3 MS
Lab Name: TestAmerica Irvine
Job No.: 240-23530-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	81.3		0.43	J	80.0	101	75-125		6020
Arsenic	83.2		5.0	U	80.0	104	75-125		6020
Beryllium	86.3		4.1		80.0	103	75-125		6020
Cadmium	77.8		1.8		80.0	95	75-125		6020
Barium	600		520		80.0	97	75-125	4	6020
Chromium	76.6		2.0	U	80.0	96	75-125		6020
Copper	73.1		8.9		80.0	80	75-125		6020
Nickel	388		320		80.0	87	75-125		6020
Lead	72.0		1.3		80.0	88	75-125		6020
Selenium	72.7		5.0	U	80.0	91	75-125		6020
Cobalt	751		690		80.0	82	75-125	4	6020
Silver	82.3		0.23	J	80.0	103	75-125		6020
Thallium	72.9		0.20	J	80.0	91	75-125		6020
Zinc	445		370		80.0	95	75-125	4	6020
Molybdenum	85.6		1.1	J	80.0	106	75-125		6020
Vanadium	80.2		0.90	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW61A-042213 MSD
Lab ID: 240-23530-3 MSD
Lab Name: TestAmerica Irvine
Job No.: 240-23530-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	82.7		80.0	103	75-125	2	20		6020
Arsenic	82.3		80.0	103	75-125	1	20		6020
Beryllium	88.7		80.0	106	75-125	3	20		6020
Cadmium	78.7		80.0	96	75-125	1	20		6020
Barium	597		80.0	93	75-125	1	20	4	6020
Chromium	76.6		80.0	96	75-125	0	20		6020
Copper	72.9		80.0	80	75-125	0	20		6020
Nickel	383		80.0	80	75-125	1	20		6020
Lead	71.2		80.0	87	75-125	1	20		6020
Selenium	71.9		80.0	90	75-125	1	20		6020
Cobalt	746		80.0	76	75-125	1	20	4	6020
Silver	82.7		80.0	103	75-125	0	20		6020
Thallium	72.5		80.0	91	75-125	1	20		6020
Zinc	443		80.0	94	75-125	0	20	4	6020
Molybdenum	87.6		80.0	108	75-125	2	20		6020
Vanadium	80.4		80.0	99	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW61A-042213 PDS Lab ID: 240-23530-3 PDS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.5		0.43	J	80.0	103	75-125		6020
Arsenic	80.8		5.0	U	80.0	101	75-125		6020
Beryllium	87.4		4.1		80.0	104	75-125		6020
Cadmium	77.8		1.8		80.0	95	75-125		6020
Barium	594		520		80.0	89	75-125		6020
Chromium	74.9		2.0	U	80.0	94	75-125		6020
Copper	71.1		8.9		80.0	78	75-125		6020
Nickel	378		320		80.0	74	75-125	W	6020
Lead	70.3		1.3		80.0	86	75-125		6020
Selenium	69.6		5.0	U	80.0	87	75-125		6020
Cobalt	735		690		80.0	62	75-125	W	6020
Silver	81.6		0.23	J	80.0	102	75-125		6020
Thallium	72.2		0.20	J	80.0	90	75-125		6020
Zinc	439		370		80.0	89	75-125		6020
Molybdenum	87.0		1.1	J	80.0	107	75-125		6020
Vanadium	78.6		0.90	J	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-100766/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	81.8		102	80	120		6020
Arsenic	80.0	83.7		105	80	120		6020
Beryllium	80.0	84.3		105	80	120		6020
Cadmium	80.0	80.9		101	80	120		6020
Barium	80.0	81.1		101	80	120		6020
Chromium	80.0	82.6		103	80	120		6020
Copper	80.0	83.9		105	80	120		6020
Nickel	80.0	82.9		104	80	120		6020
Lead	80.0	80.8		101	80	120		6020
Selenium	80.0	85.3		107	80	120		6020
Cobalt	80.0	84.0		105	80	120		6020
Silver	80.0	87.0		109	80	120		6020
Thallium	80.0	82.0		102	80	120		6020
Zinc	80.0	82.2		103	80	120		6020
Molybdenum	80.0	78.7		98	80	120		6020
Vanadium	80.0	81.9		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23592-D-8-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23530-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	2.2	J	25	U	NC		6020
Beryllium	0.41	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	120		117		1.9		6020
Chromium	1.0	J	10	U	NC		6020
Copper	1.7	J	10	U	NC		6020
Nickel	440		443		0.67		6020
Lead	0.65	J	5.0	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	580		599		4.2		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	110		119		NC		6020
Molybdenum	1.0	J	1.18	J	NC		6020
Vanadium	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 05/01/2013 12:40 End Date: 05/01/2013 16:17

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-101574/6-A	1		12:40	X
IC 440-101574/7-A	1		12:42	X
IC 440-101574/8-A	1		12:45	X
IC 440-101574/9-A	1		12:47	X
IC 440-101574/10-A	1		12:50	X
IC 440-101574/11-A	1		12:52	X
ICV 440-101574/1-A	1		12:55	X
ICB 440-101574/2-A	1		12:57	X
CRA 440-101574/5-A	1		13:00	X
CCV 440-101574/3-A	1		14:43	X
CCB 440-101574/4-A	1		14:46	X
MB 440-101603/1-A	1	T	14:57	X
LCS 440-101603/2-A	1	T	15:01	X
ZZZZZZ			15:04	
440-44777-E-2-E MS	1	T	15:06	X
440-44777-E-2-F MSD	1	T	15:09	X
ZZZZZZ			15:11	
240-23530-2	1	T	15:14	X
240-23530-3	1	T	15:16	X
240-23530-3 DU	1	T	15:19	X
CCV 440-101574/3-A	1		15:22	X
CCB 440-101574/4-A	1		15:24	X
240-23530-3 MS	1	T	15:27	X
240-23530-4	1	T	15:29	X
240-23530-5	1	T	15:32	X
240-23530-6	1	T	15:34	X
ZZZZZZ			15:37	
ZZZZZZ			15:39	
ZZZZZZ			15:42	
ZZZZZZ			15:44	
CCV 440-101574/3-A	1		15:47	X
CCB 440-101574/4-A	1		15:49	X
ZZZZZZ			15:52	
ZZZZZZ			15:54	
ZZZZZZ			15:57	
ZZZZZZ			15:59	
ZZZZZZ			16:02	
ZZZZZZ			16:04	
ZZZZZZ			16:07	
ZZZZZZ			16:09	
CCV 440-101574/3-A			16:12	
CCB 440-101574/4-A			16:14	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 05/01/2013 12:40 End Date: 05/01/2013 16:17

Lab Sample Id	D/F	Type	Time	Analytes																														
				Hg																														
CRA 440-101574/5-A	1		16:17	X																														

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	ICV 440-101574/1-A 05/01/2013 12:55				CCV 440-101574/3-A 05/01/2013 14:43				CCV 440-101574/3-A 05/01/2013 15:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.64		8.00	96	4.34		4.00	109	4.34		4.00	109

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	CCV 440-101574/3-A 05/01/2013 15:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.41		4.00	110								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-101574/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.245		122	50-150

Lab Sample ID: CRA 440-101574/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.265		132	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101574/2-A 05/01/2013 12:57		CCB 440-101574/4-A 05/01/2013 14:46		CCB 440-101574/4-A 05/01/2013 15:24		CCB 440-101574/4-A 05/01/2013 15:49	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.100	J	0.110	J	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 04/25/2013 06:40 End Date: 04/25/2013 23:00

Lab Sample Id	D/F	Type	Time	Analytes						
				Ca	Fe	K	Mg	Mn	Na	SiO2
ICIS 240-83643/1	1		06:40	X	X	X	X	X	X	X
CALSTD 240-83643/2 IC			06:44	X	X	X	X	X	X	X
CALSTD 240-83643/3 IC			06:48	X	X	X	X	X	X	X
ICV 240-83643/4	1		06:52	X	X	X	X	X	X	X
ICB 240-83643/5	1		06:56	X	X	X	X	X	X	X
CRI 240-83643/6	1		07:00							X
ZZZZZZ			07:03							
ICSA 240-83643/8	1		07:07	X	X	X	X	X	X	
ICSAB 240-83643/9	1		07:11	X	X	X	X	X	X	
CCV 240-83643/10			07:15							
CCB 240-83643/11			07:19							
ZZZZZZ			07:23							
ZZZZZZ			07:27							
ZZZZZZ			07:31							
ZZZZZZ			07:35							
ZZZZZZ			07:39							
ZZZZZZ			07:43							
CCV 240-83643/18	1		07:47	X	X	X	X	X	X	X
CCB 240-83643/19	1		07:51	X	X	X	X	X	X	X
CRI 240-83643/20	1		07:56	X	X	X	X	X	X	
MB 240-83298/1-A	1	R	08:00	X	X	X	X	X	X	X
LCS 240-83298/2-A	1	R	08:04	X	X	X	X	X	X	X
240-23530-5	1	R	08:08	X	X	X	X	X	X	X
240-23530-5 SD	5	R	08:12	X	X	X	X	X	X	X
240-23530-5 MS	1	R	08:16	X	X	X	X	X	X	X
240-23530-5 MSD	1	R	08:19	X	X	X	X	X	X	X
240-23530-2	1	R	08:23	X	X	X	X	X	X	X
ZZZZZZ			08:27							
ZZZZZZ			08:31							
CCV 240-83643/30	1		08:35	X	X	X	X	X	X	X
CCB 240-83643/31	1		08:39	X	X	X	X	X	X	X
ZZZZZZ			08:43							
ZZZZZZ			08:46							
ZZZZZZ			08:50							
ZZZZZZ			08:54							
ZZZZZZ			08:58							
CRI 240-83643/37	1		09:01	X	X	X	X	X	X	
CRI 240-83643/38	1		09:05							X
ZZZZZZ			09:09							
ZZZZZZ			09:13							

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

ICV Source: MT6500ICV_00010 Concentration Units: ug/L

CCV Source: MT6500CCV_00026

Analyte	ICV 240-83643/4 04/25/2013 06:52				CCV 240-83643/18 04/25/2013 07:47				CCV 240-83643/30 04/25/2013 08:35			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	24700		25000	99	51700		50000	103	52400		50000	105
Iron	12300		12500	98	25500		25000	102	25800		25000	103
Magnesium	24500		25000	98	51300		50000	103	52000		50000	104
Manganese	1540		1500	103	2050		2000	102	2050		2000	102
Potassium	24100		25000	96	50600		50000	101	51000		50000	102
SiO2, Silica	6420		6420	100	11300		10700	106	11400		10700	107
Sodium	24400		25000	97	51100		50000	102	51300		50000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-83643/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1010	J	95	70-130

Lab Sample ID: CRI 240-83643/20 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00011

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	4980	J	100	70-130
Iron	200	207		103	70-130
Potassium	5000	4830	J	97	70-130
Magnesium	5000	5090		102	70-130
Manganese	15.0	15.5		104	70-130
Sodium	5000	4980	J	100	70-130

Lab Sample ID: CRI 240-83643/37 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00011

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5000		100	70-130
Iron	200	206		103	70-130
Potassium	5000	4880	J	98	70-130
Magnesium	5000	5110		102	70-130
Manganese	15.0	15.5		103	70-130
Sodium	5000	4970	J	99	70-130

Lab Sample ID: CRI 240-83643/38 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1070	J	100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-83643/5 04/25/2013 06:56		CCB 240-83643/19 04/25/2013 07:51		CCB 240-83643/31 04/25/2013 08:39			
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U		
Iron	200	200	U	200	U	200	U		
Magnesium	5000	5000	U	5000	U	5000	U		
Manganese	15	15	U	15	U	15	U		
Potassium	5000	5000	U	5000	U	85.7	J		
SiO2, Silica	1100	1100	U	1100	U	1100	U		
Sodium	5000	5000	U	5000	U	5000	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICSA 240-83643/8 Instrument ID: I9

Lab File ID: I9042513A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True	Found	
	Solution A	Solution A	Percent Recovery
Calcium	**500000**	**470930**	**94**
Iron	**200000**	**185410**	**93**
Magnesium	**500000**	**491940**	**98**
Manganese		**2.84**	
Potassium		**66.4**	
Sodium		**60.0**	
Aluminum	*500000*	*499930*	*100*
Antimony		*-1.78*	
Arsenic		*-1.06*	
Barium		*0.367*	
Beryllium		*-0.339*	
Boron		*1.55*	
Cadmium		*0.389*	
Chromium		*2.93*	
Cobalt		*-1.53*	
Copper		*-2.85*	
Lead		*-3.49*	
Lithium		*-23.6*	
Molybdenum		*-1.88*	
Nickel		*0.688*	
Selenium		*4.21*	
Silicon		*-8.65*	
Silver		*-0.250*	
Strontium		*6.70*	
Thallium		*0.640*	
Tin		*5.52*	
Titanium		*-0.0907*	
Vanadium		*-1.80*	
Zinc		*10.4*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICSAB 240-83643/9 Instrument ID: I9

Lab File ID: I9042513A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**473650**	**95**
Iron	**200000**	**186400**	**93**
Magnesium	**500000**	**492020**	**98**
Manganese	**500**	**493**	**99**
Potassium	**10000**	**10246**	**102**
Sodium	**10000**	**10327**	**103**
Aluminum	*500000*	*503850*	*101*
Antimony	*1000*	*1021*	*102*
Arsenic	*1000*	*1011*	*101*
Barium	*500*	*485*	*97*
Beryllium	*500*	*487*	*97*
Boron	*500*	*513*	*103*
Cadmium	*1000*	*1023*	*102*
Chromium	*500*	*480*	*96*
Cobalt	*500*	*499*	*100*
Copper	*500*	*523*	*105*
Lead	*1000*	*896*	*90*
Lithium	*500*	*501*	*100*
Molybdenum	*1000*	*964*	*96*
Nickel	*1000*	*995*	*99*
Selenium	*1000*	*1011*	*101*
Silicon	*10000*	*9837*	*98*
Silver	*1000*	*1098*	*110*
Strontium	*1500*	*1426*	*95*
Thallium	*1000*	*971*	*97*
Tin	*500*	*524*	*105*
Titanium	*500*	*514*	*103*
Vanadium	*500*	*478*	*96*
Zinc	*1000*	*1019*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/30/2013 12:19 End Date: 04/30/2013 13:55

| Lab Sample Id | D/F | Type | Time | Analytes | | |

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-101391/7 04/30/2013 12:36				CCV 440-101391/22 04/30/2013 13:30				CCV 440-101391/29 04/30/2013 13:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	24.2		25.0	97	49.2		50.0	98	47.4		50.0	95
Arsenic	25.4		25.0	101	49.5		50.0	99	49.8		50.0	100
Barium	25.2		25.0	101	49.8		50.0	100	49.8		50.0	100
Beryllium	24.7		25.0	99	50.0		50.0	100	49.3		50.0	99
Cadmium	24.9		25.0	100	49.5		50.0	99	49.1		50.0	98
Chromium	24.7		25.0	99	50.5		50.0	101	50.8		50.0	102
Cobalt	25.2		25.0	101	50.4		50.0	101	50.8		50.0	102
Copper	25.7		25.0	103	48.9		50.0	98	49.2		50.0	98
Lead	24.4		25.0	98	47.8		50.0	96	49.4		50.0	99
Molybdenum	25.4		25.0	102	50.8		50.0	102	48.6		50.0	97
Nickel	25.5		25.0	102	48.8		50.0	98	49.0		50.0	98
Selenium	25.4		25.0	102	49.5		50.0	99	50.3		50.0	101
Silver	23.4		25.0	94	52.0		50.0	104	50.2		50.0	100
Thallium	23.6		25.0	94	49.5		50.0	99	50.4		50.0	101
Vanadium	26.0		25.0	104	50.4		50.0	101	50.7		50.0	101
Zinc	25.3		25.0	101	50.0		50.0	100	49.7		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-101391/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.01	J	101	50-150
Arsenic	1.00	0.947	J	95	50-150
Beryllium	0.500	0.510		102	50-150
Cadmium	0.500	0.524	J	105	50-150
Barium	1.00	1.07		107	50-150
Chromium	1.00	0.974	J	97	50-150
Copper	1.00	1.17	J	117	50-150
Nickel	1.00	1.15	J	115	50-150
Lead	1.00	1.02		102	50-150
Selenium	1.00	0.810	J	81	50-150
Cobalt	0.500	0.517	J	103	50-150
Silver	1.00	0.853	J	85	50-150
Thallium	1.00	0.970	J	97	50-150
Zinc	5.00	12.1	J	242	50-150
Molybdenum	1.00	1.08	J	108	50-150
Vanadium	2.00	2.14		107	50-150

Lab Sample ID: CRI 440-103335/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.01	J	101	50-150
Arsenic	1.00	0.947	J	95	50-150
Beryllium	0.500	0.510		102	50-150
Cadmium	0.500	0.524	J	105	50-150
Barium	1.00	1.07		107	50-150
Chromium	1.00	0.974	J	97	50-150
Copper	1.00	1.17	J	117	50-150
Nickel	1.00	1.15	J	115	50-150
Lead	1.00	1.02		102	50-150
Selenium	1.00	0.810	J	81	50-150
Cobalt	0.500	0.517	J	103	50-150
Silver	1.00	0.853	J	85	50-150
Thallium	1.00	0.970	J	97	50-150
Zinc	5.00	12.1	J	242	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101391/8 04/30/2013 12:41		CCB 440-101391/23 04/30/2013 13:36		CCB 440-101391/30 04/30/2013 13:55			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	0.236	J	2.0	U	0.298	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	1.0	U	0.165	J		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICSA 440-101391/11 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Found Percent Recovery
Antimony		**0.307**	
Arsenic		**-0.0200**	
Barium		**0.254**	
Beryllium		**0.0060**	
Cadmium		**0.0780**	
Chromium		**1.31**	
Cobalt		**0.0830**	
Copper		**1.46**	
Lead		**0.134**	
Molybdenum	**2000**	**2304**	**115**
Nickel		**1.32**	
Selenium		**-0.268**	
Silver		**0.0640**	
Thallium		**0.0130**	
Vanadium		**0.266**	
Zinc		**5.32**	
Aluminum	*100000*	*95708*	*96*
Calcium	*100000*	*102253*	*102*
Cerium		*0.0370*	
Iron	*100000*	*104545*	*105*
Magnesium	*100000*	*101906*	*102*
Manganese		*4.52*	
Potassium	*100000*	*104914*	*105*
Sodium	*100000*	*103769*	*104*
Sr		*4.98*	
Tin		*0.283*	
Uranium		*0.0120*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICSAB 440-101391/14 Instrument ID: ICPMS4

Lab File ID: 014ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**21.0**	**105**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.1**	**110**
Beryllium	**20.0**	**21.5**	**107**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.6**	**103**
Cobalt	**20.0**	**19.4**	**97**
Copper	**20.0**	**20.5**	**103**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2169**	**107**
Nickel	**20.0**	**20.3**	**101**
Selenium	**20.0**	**20.4**	**102**
Silver	**20.0**	**19.7**	**98**
Thallium	**20.0**	**18.4**	**92**
Vanadium	**20.0**	**19.7**	**99**
Zinc	**20.0**	**29.9**	**149**
Aluminum	*100000*	*86214*	*86*
Calcium	*101000*	*95832*	*95*
Cerium	*20.0*	*22.1*	*111*
Iron	*100000*	*97358*	*97*
Magnesium	*101000*	*92164*	*92*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*96198*	*96*
Sodium	*101000*	*94298*	*94*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*21.0*	*105*
Uranium	*20.0*	*20.2*	*101*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/30/2013 End Date: 04/30/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-101391/2	12:22	100		100		100		100		100	
STD1 440-101391/3	12:25	101		100		100		101		99	
STD2 440-101391/4	12:28	101		100		100		100		98	
STD3 440-101391/5	12:31	101		100		101		100		99	
STD4 440-101391/6	12:33	100		99		99		98		98	
ICV 440-101391/7	12:36	102		99		100		100		99	
ICB 440-101391/8	12:41	100		97		98		100		99	
CRI 440-101391/9	12:44	103		101		100		101		99	
CRI 440-101391/10	12:47	104		100		100		100		100	
ICSA 440-101391/11	12:50	83		91		91		89		95	
ICSAB 440-101391/14	13:00	76		89		90		89		96	
MB 440-100766/1-A	13:06	85		91		92		98		101	
LCS 440-100766/2-A	13:15	83		90		93		99		101	
240-23530-3	13:17	79		99		92		88		88	
240-23530-3 MS	13:20	82		103		94		89		86	
240-23530-3 MSD	13:23	81		104		95		88		85	
240-23530-3 PDS	13:25	80		105		95		87		85	
CCV 440-101391/22	13:30	98		110		108		104		101	
CCB 440-101391/23	13:36	95		102		101		102		101	
240-23592-D-8-A SD	13:49	85		101		100		100		100	
CCV 440-101391/29	13:52	88		98		98		101		100	
CCB 440-101391/30	13:55	89		97		97		101		101	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/30/2013 12:22 End Date: 04/30/2013 17:54

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn										
STD0 440-103335/1 IC	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD1 440-103335/2 IC	1		12:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD2 440-103335/3 IC	1		12:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD3 440-103335/4 IC	1		12:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD4 440-103335/5 IC	1		12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICV 440-103335/6	1		12:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICB 440-103335/7	1		12:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CRI 440-103335/8	1		12:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CRI 440-103335/9	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSA 440-103335/10	1		12:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 440-103335/11			12:57																										
ICSAB 440-103335/12	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 440-103335/13			13:03																										
CCV 440-103335/14	1		16:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 440-103335/15	1		16:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23530-2	1	R	17:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23530-4	2	R	17:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23530-5	1	R	17:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23530-6	1	R	17:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ZZZZZZ			17:21																										
ZZZZZZ			17:24																										
ZZZZZZ			17:27																										
CCV 440-103335/23	1		17:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 440-103335/24	1		17:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ZZZZZZ			17:35																										
ZZZZZZ			17:38																										
ZZZZZZ			17:41																										
ZZZZZZ			17:43																										
ZZZZZZ			17:46																										
ZZZZZZ			17:48																										
CCV 440-103335/31			17:51																										
CCB 440-103335/32			17:54																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-103335/6 04/30/2013 12:36				CCV 440-103335/14 04/30/2013 16:53				CCV 440-103335/23 04/30/2013 17:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	24.2		25.0	97	45.9		50.0	92	47.1		50.0	94
Arsenic	25.4		25.0	101	47.1		50.0	94	47.8		50.0	96
Barium	25.2		25.0	101	47.8		50.0	96	47.7		50.0	95
Beryllium	24.7		25.0	99	50.4		50.0	101	51.3		50.0	103
Cadmium	24.9		25.0	100	46.9		50.0	94	47.5		50.0	95
Chromium	24.7		25.0	99	48.3		50.0	97	47.7		50.0	95
Cobalt	25.2		25.0	101	47.5		50.0	95	47.7		50.0	95
Copper	25.7		25.0	103	46.5		50.0	93	46.4		50.0	93
Lead	24.4		25.0	98	48.2		50.0	96	46.9		50.0	94
Molybdenum	25.4		25.0	102	44.8		50.0	90	45.8		50.0	92
Nickel	25.5		25.0	102	45.6		50.0	91	45.8		50.0	92
Selenium	25.4		25.0	102	49.0		50.0	98	49.3		50.0	99
Silver	23.4		25.0	94	47.0		50.0	94	48.6		50.0	97
Thallium	23.6		25.0	94	50.3		50.0	101	49.7		50.0	99
Vanadium	26.0		25.0	104	48.0		50.0	96	47.7		50.0	95
Zinc	25.3		25.0	101	49.0		50.0	98	50.6		50.0	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-103335/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	1.00	1.08	J	108	50-150
Vanadium	2.00	2.14		107	50-150

Lab Sample ID: CRI 440-101391/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

4/30/13

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.98	J	99	50-150
Arsenic	2.00	2.09		105	50-150
Beryllium	1.00	1.02		102	50-150
Cadmium	1.00	1.08		108	50-150
Barium	2.00	2.12		106	50-150
Chromium	2.00	2.18		109	50-150
Copper	2.00	2.25		112	50-150
Nickel	2.00	2.51		125	50-150
Lead	2.00	2.03		101	50-150
Selenium	2.00	2.06		103	50-150
Cobalt	1.00	1.04		104	50-150
Silver	2.00	2.02		101	50-150
Thallium	2.00	1.94		97	50-150
Zinc	10.0	12.4	J	124	50-150
Molybdenum	2.00	2.16		108	50-150
Vanadium	4.00	4.28		107	50-150

Lab Sample ID: CRI 440-103335/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

4/30/13

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.98	J	99	50-150
Arsenic	2.00	2.09		105	50-150
Beryllium	1.00	1.02		102	50-150
Cadmium	1.00	1.08		108	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-103335/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	2.00	2.12		106	50-150
Chromium	2.00	2.18		109	50-150
Copper	2.00	2.25		112	50-150
Nickel	2.00	2.51		125	50-150
Lead	2.00	2.03		101	50-150
Selenium	2.00	2.06		103	50-150
Cobalt	1.00	1.04		104	50-150
Silver	2.00	2.02		101	50-150
Thallium	2.00	1.94		97	50-150
Zinc	10.0	12.4	J	124	50-150
Molybdenum	2.00	2.16		108	50-150
Vanadium	4.00	4.28		107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-103335/7 04/30/2013 12:41		CCB 440-103335/15 04/30/2013 16:55		CCB 440-103335/24 04/30/2013 17:32			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	0.236	J	0.494	J	0.360	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	0.150	J	0.143	J		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICSA 440-103335/10 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.307**	
Arsenic		**-0.0200**	
Barium		**0.254**	
Beryllium		**0.0060**	
Cadmium		**0.0780**	
Chromium		**1.31**	
Cobalt		**0.0830**	
Copper		**1.46**	
Lead		**0.134**	
Molybdenum	**2000**	**2304**	**115**
Nickel		**1.32**	
Selenium		**-0.268**	
Silver		**0.0640**	
Thallium		**0.0130**	
Vanadium		**0.266**	
Zinc		**5.32**	
Aluminum	*100000*	*95708*	*96*
Calcium	*100000*	*102253*	*102*
Cerium		*0.0370*	
Iron	*100000*	*104545*	*105*
Magnesium	*100000*	*101906*	*102*
Manganese		*4.52*	
Potassium	*100000*	*104914*	*105*
Sodium	*100000*	*103769*	*104*
Sr		*4.98*	
Tin		*0.283*	
Uranium		*0.0120*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

Lab Sample ID: ICSAB 440-103335/12 Instrument ID: ICPMS4

Lab File ID: 014ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**21.0**	**105**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.1**	**110**
Beryllium	**20.0**	**21.5**	**107**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.6**	**103**
Cobalt	**20.0**	**19.4**	**97**
Copper	**20.0**	**20.5**	**103**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2169**	**107**
Nickel	**20.0**	**20.3**	**101**
Selenium	**20.0**	**20.4**	**102**
Silver	**20.0**	**19.7**	**98**
Thallium	**20.0**	**18.4**	**92**
Vanadium	**20.0**	**19.7**	**99**
Zinc	**20.0**	**29.9**	**149**
Aluminum	*100000*	*86214*	*86*
Calcium	*101000*	*95832*	*95*
Cerium	*20.0*	*22.1*	*111*
Iron	*100000*	*97358*	*97*
Magnesium	*101000*	*92164*	*92*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*96198*	*96*
Sodium	*101000*	*94298*	*94*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*21.0*	*105*
Uranium	*20.0*	*20.2*	*101*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23530-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/30/2013 End Date: 04/30/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-103335/1	12:22	100		100		100		100		100	
STD1 440-103335/2	12:25	101		100		100		101		99	
STD2 440-103335/3	12:28	101		100		100		100		98	
STD3 440-103335/4	12:31	101		100		101		100		99	
STD4 440-103335/5	12:33	100		99		99		98		98	
ICV 440-103335/6	12:36	102		99		100		100		99	
ICB 440-103335/7	12:41	100		97		98		100		99	
CRI 440-103335/8	12:44	103		101		100		101		99	
CRI 440-103335/9	12:47	104		100		100		100		100	
ICSA 440-103335/10	12:50	83		91		91		89		95	
ICSAB 440-103335/12	13:00	76		89		90		89		96	
CCV 440-103335/14	16:53	73		96		98		103		105	
CCB 440-103335/15	16:55	73		93		96		102		104	
240-23530-2	17:10	69		91		92		98		103	
240-23530-4	17:13	67		92		93		97		102	
240-23530-5	17:16	71		90		93		98		103	
240-23530-6	17:18	72		88		92		100		104	
CCV 440-103335/23	17:30	74		100		101		105		105	
CCB 440-103335/24	17:32	72		97		98		103		104	

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-23530-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83727 Batch Start Date: 04/25/13 13:26 Batch Analyst: Nicholas, Courtney

Batch Method: 310.1 Batch End Date: 04/25/13 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	CalcMsg	FinalAmount	WCALKMSMSD 00006	WCPHENOMINER 00003	
LCS 240-83727/4		310.1		50 mL	BuretStart2 is blank	50 mL		50 mL	
MB 240-83727/5		310.1		50 mL	BuretStart2 is blank	50 mL			
240-23653-C-1 DU		310.1	T	50 mL	BuretStart2 is blank	50 mL			
240-23653-C-1 MS		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-23653-C-1 MSD		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-23530-J-2	MRC-MW25A-042213	310.1	T	50 mL	BuretStart2 is blank	50 mL			
240-23530-J-5	MRC-MW-21B-042213	310.1	T	50 mL	BuretStart2 is blank	50 mL			

Batch Notes	
pH Buffer 1 ID	4-880197
pH Buffer 2 ID	7-934942
pH Buffer 3 ID	10-925077
Sulfuric Acid Lot Number	922109
Nominal Amount Used	50 mL
Pipette ID	377821
Probe ID	WCP92
Normality of first Titrant	0.0203 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83518 Batch Start Date: 04/25/13 08:59 Batch Analyst: Penman, Nick

Batch Method: 160.1 Batch End Date: 04/26/13 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	InitialAmount	TareWeight	Weight1	Weight2	Weight3
MB 240-83518/1		160.1			100 mL	72.5575 g	72.5570 g	72.5570 g	0 g
LCS 240-83518/2		160.1			50 mL	79.4711 g	79.4968 g	79.4966 g	0 g
240-23602-A-2 DU		160.1	T	2003 umhos/cm	50 mL	72.4668 g	72.5374 g	72.5370 g	0 g
240-23530-J-2	MRC-MW25A-042213	160.1	T	525 umhos/cm	100 mL	76.3072 g	76.3342 g	76.3340 g	0 g
240-23530-J-5	MRC-MW-21B-042213	160.1	T	288 umhos/cm	100 mL	74.6482 g	74.6654 g	74.6650 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	WCWIBBYSOLIDS 00004	
MB 240-83518/1		160.1		PASS_D	-0.00050 g	-0.00050 g	100 mL		
LCS 240-83518/2		160.1		PASS_D	0.02570 g	0.02550 g	100 mL	50 mL	
240-23602-A-2 DU		160.1	T	PASS_D	0.07060 g	0.07020 g	100 mL		
240-23530-J-2	MRC-MW25A-042213	160.1	T	PASS_D	0.02700 g	0.02680 g	100 mL		
240-23530-J-5	MRC-MW-21B-042213	160.1	T	PASS_D	0.01720 g	0.01680 g	100 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83518 Batch Start Date: 04/25/13 08:59 Batch Analyst: Penman, Nick

Batch Method: 160.1 Batch End Date: 04/26/13 12:00

Batch Notes	
Balance ID	B044
Batch Comment	Prep [IN 4/25/13, 09:50, Oven4, 97C] [OUT 4/26/13, 08:00, 97C]
Constant Weight (WT2) Date/Time in Oven	4/26/13, 10:45
Constant Weight (WT2) Date/Time Out	4/26/13, 11:45
Constant Weight (WT2) Temp In	179 Celsius
Constant Weight (WT2) Temp Out	179 Celsius
Uncorrected CW (Wt2) Temp In	181 Celsius
Uncorrected CW (Wt2) Temp Out	181 Celsius
Filter Paper Lot Number	950445
Date samples were placed in the oven	4/26/13, 08:00
Oven Temp when samples are put in oven	179 Celsius
Nominal Amount Used	100 mL
Date samples were removed from oven	4/26/13, 09:15
Oven Temp when samples removed from oven	178 Celsius
Oven ID	001
Uncorrected In Temperature	181 Celsius
Uncorrected Out Temperature	180 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83184 Batch Start Date: 04/23/13 11:59 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/23/13 15:32

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00102	WCICLCS 00181			
STD1 240-83184/3		300.0		5 mL	0.025 mL				
STD2 240-83184/4		300.0		5 mL	0.125 mL				
STD3 240-83184/5		300.0		5 mL	0.25 mL				
STD4 240-83184/6		300.0		5 mL	0.5 mL				
STD5 240-83184/7		300.0		5 mL	1.25 mL				
STD6 240-83184/8		300.0		5 mL	2 mL				
STD7 240-83184/9		300.0		5 mL	2.5 mL				
STD8 240-83184/10		300.0		5 mL	3.75 mL				
STD9 240-83184/11		300.0		5 mL	5 mL				
ICV 240-83184/13		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83185 Batch Start Date: 04/23/13 11:59 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/23/13 15:32

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00102	WCICLCS 00181			
STD1 240-83185/3		300.0		5 mL	0.025 mL				
STD2 240-83185/4		300.0		5 mL	0.125 mL				
STD3 240-83185/5		300.0		5 mL	0.25 mL				
STD4 240-83185/6		300.0		5 mL	0.5 mL				
STD5 240-83185/7		300.0		5 mL	1.25 mL				
STD6 240-83185/8		300.0		5 mL	2 mL				
STD7 240-83185/9		300.0		5 mL	2.5 mL				
STD8 240-83185/10		300.0		5 mL	3.75 mL				
STD9 240-83185/11		300.0		5 mL	5 mL				
ICV 240-83185/13		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83256 Batch Start Date: 04/23/13 15:59 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/23/13 22:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00267	WCICELUENT 00078	WCICLCS 00181	WCICSOLNA1 00008	WCICSOLNB1 00008
CCV 240-83256/1		300.0		5 mL	5 mL				
CCB 240-83256/2		300.0		5 mL		5 mL			
MB 240-83256/3		300.0		5 mL		5 mL			
LCS 240-83256/4		300.0		5 mL			5 mL		
240-23530-J-2	MRC-MW25A-042213	300.0	T	5 mL					
240-23530-J-5	MRC-MW-21B-042213	300.0	T	5 mL					
240-23530-J-5 MS	MRC-MW-21B-042213	300.0	T	5 mL				0.1 mL	0.1 mL
CCV 240-83256/13		300.0		5 mL	5 mL				
CCB 240-83256/14		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83257 Batch Start Date: 04/23/13 15:59 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/23/13 22:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00267	WCICELUENT 00078	WCICLCS 00181	WCICSOLNA1 00008	WCICSOLNB1 00008
CCV 240-83257/1		300.0		5 mL	5 mL				
CCB 240-83257/2		300.0		5 mL		5 mL			
MB 240-83257/3		300.0		5 mL		5 mL			
LCS 240-83257/4		300.0		5 mL			5 mL		
240-23530-J-2	MRC-MW25A-042213	300.0	T	5 mL					
240-23530-J-5	MRC-MW-21B-042213	300.0	T	5 mL					
240-23530-J-5 MS	MRC-MW-21B-042213	300.0	T	5 mL				0.1 mL	0.1 mL
CCV 240-83257/13		300.0		5 mL	5 mL				
CCB 240-83257/14		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83616 Batch Start Date: 04/25/13 12:33 Batch Analyst: Kuhle, Julie

Batch Method: 350.3 Batch End Date: 04/25/13 15:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCNH31000 00020	WCSIMPNUTRNT 00022		
CCV 240-83616/5		350.3		50 mL	50 mL	0.125 mL			
CCB 240-83616/6		350.3		50 mL	50 mL				
MB 240-83616/7		350.3		50 mL	50 mL				
LCS 240-83616/8		350.3		50 mL	50 mL		10 mL		
240-23337-G-6 MS		350.3	T	50 mL	50 mL	0.125 mL			
240-23337-G-6 MSD		350.3	T	50 mL	50 mL	0.125 mL			
CCV 240-83616/17		350.3		50 mL	50 mL	0.125 mL			
CCB 240-83616/18		350.3		50 mL	50 mL				
240-23530-H-2	MRC-MW25A-042213	350.3	T	50 mL	50 mL				
240-23530-H-5	MRC-MW-21B-042213	350.3	T	50 mL	50 mL				
CCV 240-83616/29		350.3		50 mL	50 mL	0.125 mL			
CCB 240-83616/30		350.3		50 mL	50 mL				

Batch Notes	
Batch Comment	beakers 871943
Buffer Reagent ID Number	937650
Pipette ID	927754 380192

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Batch Number: 83460 Batch Start Date: 04/24/13 12:49 Batch Analyst: Harshman, Tom

Batch Method: 9060 Batch End Date: 04/24/13 15:16

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WC LCS 00006	WC TOC CCV 00130		
CCV 240-83460/1		9060		40 mL	40 mL		40 mL		
CCB 240-83460/2		9060		40 mL	40 mL				
MB 240-83460/3		9060		40 mL	40 mL				
LCS 240-83460/4		9060		40 mL	40 mL	40 mL			
240-23530-G-5	MRC-MW-21B-042213	9060	D	40 mL	40 mL				
240-23530-G-5 MS	MRC-MW-21B-042213	9060	D	40 mL	40 mL		20 mL		
240-23530-G-2	MRC-MW25A-042213	9060	D	40 mL	40 mL				
CCV 240-83460/8		9060		40 mL	40 mL		40 mL		
CCB 240-83460/9		9060		40 mL	40 mL				

Batch Notes	
Lot # of Phosphoric Acid	836447
Sodium Persulfate Reagent ID Number	836449

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID:	83518 Date:	04/25/2013 08:59					
160.1	MB 240-83518/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID:	83256 Date:	04/23/2013 16:32					
300.0	MB 240-83256/3	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-83256/3	Sulfate	1.0	U	mg/L	1.0	1
Batch ID:	83257 Date:	04/23/2013 16:32					
300.0	MB 240-83257/3	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-83257/3	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-83257/3	Orthophosphate as P	0.50	U ^	mg/L	0.50	1
Batch ID:	83727 Date:	04/25/2013 14:03					
310.1	MB 240-83727/5	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID:	83616 Date:	04/25/2013 12:34					
350.3	MB 240-83616/7	Ammonia (as N)	0.20	U	mg/L	0.20	1
Batch ID:	83460 Date:	04/24/2013 13:10					
9060	MB 240-83460/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 83256	Date: 04/23/2013 17:38										
300.0	240-23530-5	Chloride	70		mg/L						
300.0	240-23530-5 MS	Chloride	143		mg/L	50.0	146	80-120			F
300.0	240-23530-5	Sulfate	1.9		mg/L						
300.0	240-23530-5 MS	Sulfate	66.2		mg/L	50.0	129	80-120			F
Batch ID: 83257	Date: 04/23/2013 17:38										
300.0	240-23530-5	Nitrite as N	0.10	U	mg/L						
300.0	240-23530-5 MS	Nitrite as N	3.37		mg/L	2.50	135	80-120			F
300.0	240-23530-5	Nitrate as N	0.10	U	mg/L						
300.0	240-23530-5 MS	Nitrate as N	3.41		mg/L	2.50	136	80-120			F
300.0	240-23530-5	Orthophosphate as P	0.50	U	mg/L						^
300.0	240-23530-5 MS	Orthophosphate as P	1.82		mg/L	2.50	73	80-120			F ^
Batch ID: 83727	Date: 04/25/2013 17:41										
310.1	240-23653-C-1	Alkalinity	600		mg/L						
310.1	240-23653-C-1 MS	Alkalinity	944		mg/L	500	69	10-160			
Batch ID: 83616	Date: 04/25/2013 13:15										
350.3	240-23337-G-6	Ammonia (as N)	0.20	U	mg/L						
350.3	240-23337-G-6 MS	Ammonia (as N)	2.41		mg/L	2.50	96	75-125			
Batch ID: 83460	Date: 04/24/2013 14:13										
9060	240-23530-5	Dissolved Organic Carbon	0.67	J	mg/L						
9060	240-23530-5 MS	Dissolved Organic Carbon	25.0		mg/L	25.0	97	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 83727		Date: 04/25/2013 18:04									
310.1	240-23653-C-1 MSD	Alkalinity	930		mg/L	500	66	10-160	2	24	
Batch ID: 83616		Date: 04/25/2013 13:15									
350.3	240-23337-G-6 MSD	Ammonia (as N)	2.37		mg/L	2.50	95	75-125	2	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	83518	Date: 04/25/2013 08:59						
160.1		240-23602-A-2	Total Dissolved Solids	1400	mg/L			
160.1		240-23602-A-2 DU	Total Dissolved Solids	1400	mg/L	2	20	
Batch ID:	83727	Date: 04/25/2013 17:01						
310.1		240-23653-C-1	Alkalinity	600	mg/L			
310.1		240-23653-C-1 DU	Alkalinity	596	mg/L	0.7	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 83518	Date: 04/25/2013 08:59										
						LCS Source: WCWIBBYSOLIDS_00004					
160.1	LCS 240-83518/2	Total Dissolved Solids	510		mg/L	499	102	88-110			
Batch ID: 83256	Date: 04/23/2013 16:49										
						LCS Source: WCICLCS_00181					
300.0	LCS 240-83256/4	Chloride	53.2		mg/L	50.0	106	90-110			
300.0	LCS 240-83256/4	Sulfate	49.6		mg/L	50.0	99	90-110			
Batch ID: 83257	Date: 04/23/2013 16:49										
						LCS Source: WCICLCS_00181					
300.0	LCS 240-83257/4	Nitrite as N	2.54		mg/L	2.50	102	90-110			
300.0	LCS 240-83257/4	Nitrate as N	2.71		mg/L	2.50	108	90-110			
300.0	LCS 240-83257/4	Orthophosphate as P	2.51		mg/L	2.50	100	90-110			^
Batch ID: 83727	Date: 04/25/2013 13:57										
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-83727/4	Alkalinity	81.4		mg/L	79.5	102	90-127			
Batch ID: 83616	Date: 04/25/2013 12:34										
						LCS Source: WCSIMPNUTRNT_00022					
350.3	LCS 240-83616/8	Ammonia (as N)	7.00		mg/L	6.86	102	85-114			
Batch ID: 83460	Date: 04/24/2013 13:21										
						LCS Source: WC LCS_00006					
9060	LCS 240-83460/4	Dissolved Organic Carbon	48.3		mg/L	48.1	100	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/23/2013 11:59 End Date: 04/23/2013 15:32

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/23/2013 15:59 End Date: 04/23/2013 22:50

Lab Sample Id	D/F	Type	Time	Analytes																												
				CL-	SO4																											
CCV 240-83256/1	1		15:59	X	X																											
CCB 240-83256/2	1		16:16	X	X																											
MB 240-83256/3	1	T	16:32	X	X																											
LCS 240-83256/4	1	T	16:49	X	X																											
240-23530-2	1	T	17:05	X	X																											
240-23530-5	1	T	17:21	X	X																											
240-23530-5 MS	1	T	17:38	X	X																											
ZZZZZZ			17:54																													
ZZZZZZ			18:11																													
ZZZZZZ			18:27																													
ZZZZZZ			18:43																													
ZZZZZZ			19:00																													
CCV 240-83256/13	1		19:16	X	X																											
CCB 240-83256/14	1		19:33	X	X																											
ZZZZZZ			19:49																													
ZZZZZZ			20:06																													
ZZZZZZ			20:22																													
ZZZZZZ			20:38																													
ZZZZZZ			20:55																													
ZZZZZZ			21:11																													
ZZZZZZ			21:28																													
ZZZZZZ			21:44																													
ZZZZZZ			22:00																													
ZZZZZZ			22:17																													
CCV 240-83256/25			22:33																													
CCB 240-83256/26			22:50																													

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Analyst: LG Batch Start Date: 04/23/2013

Reporting Units: mg/L Analytical Batch No.: 83184

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	15:16	Chloride	52.7	50.0	105	90-110		WCICLCS_00181
			Sulfate	49.4	50.0	99	90-110		WCICLCS_00181

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Analyst: LG Batch Start Date: 04/23/2013

Reporting Units: mg/L Analytical Batch No.: 83256

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:59	Chloride	52.6	50.0	105	90-110		WCICCCV_00267
			Sulfate	49.5	50.0	99	90-110		WCICCCV_00267
2	CCB	16:16	Chloride	1.0				U	
			Sulfate	1.0				U	
13	CCV	19:16	Chloride	52.9	50.0	106	90-110		WCICCCV_00267
			Sulfate	49.7	50.0	99	90-110		WCICCCV_00267
14	CCB	19:33	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/23/2013 11:59 End Date: 04/23/2013 15:32

Lab Sample Id	D/F	Type	Time	Analytes																														
				N-No2	NO3	Orthophosasp																														
ZZZZZZ			11:59																															
ZZZZZZ			12:15																															
STD1 240-83185/3 IC	1		12:32	X	X	X																												
STD2 240-83185/4 IC	1		12:48	X	X	X																												
STD3 240-83185/5 IC	1		13:05	X	X	X																												
STD4 240-83185/6 IC	1		13:21	X	X	X																												
STD5 240-83185/7 ICRT	1		13:37	X	X	X																												
STD6 240-83185/8 IC	1		13:54	X	X	X																												
STD7 240-83185/9 IC	1		14:10	X	X	X																												
STD8 240-83185/10 IC	1		14:27	X	X	X																												
STD9 240-83185/11 IC	1		14:43	X	X	X																												
ZZZZZZ			14:59																															
ICV 240-83185/13	1		15:16	X	X	X																												
ICB 240-83185/14			15:32																															

Prep Types:

=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/23/2013 15:59 End Date: 04/23/2013 22:50

| Lab Sample Id | D/F | Type | Time | Analytes | | |

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Analyst: LG Batch Start Date: 04/23/2013

Reporting Units: mg/L Analytical Batch No.: 83185

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	15:16	Nitrite as N	2.53	2.50	101	90-110		WCICLCS_00181
			Nitrate as N	2.73	2.50	109	90-110		WCICLCS_00181
			Orthophosphate as P	2.48	2.50	99	90-110		WCICLCS_00181

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Analyst: LG Batch Start Date: 04/23/2013

Reporting Units: mg/L Analytical Batch No.: 83257

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	15:59	Nitrite as N	2.55	2.50	102	90-110		WCICCCV_00267
			Nitrate as N	2.64	2.50	106	90-110		WCICCCV_00267
			Orthophosphate as P	2.48	2.50	99	90-110		WCICCCV_00267
2	CCB	16:16	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
13	CCV	19:16	Nitrite as N	2.51	2.50	100	90-110		WCICCCV_00267
			Nitrate as N	2.62	2.50	105	90-110		WCICCCV_00267
			Orthophosphate as P	2.91	2.50	116	90-110		WCICCCV_00267
14	CCB	19:33	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 04/25/2013 12:33 End Date: 04/25/2013 15:40

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
IC 240-83616/1			12:33	X
IC 240-83616/2			12:33	X
IC 240-83616/3			12:33	X
IC 240-83616/4			12:33	X
CCV 240-83616/5	1		12:33	X
CCB 240-83616/6	1		12:34	X
MB 240-83616/7	1	T	12:34	X
LCS 240-83616/8	5	T	12:34	X
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
ZZZZZZ			13:11	
240-23337-G-6 MS	1	T	13:15	X
240-23337-G-6 MSD	1	T	13:15	X
CCV 240-83616/17	1		13:16	X
CCB 240-83616/18	1		13:38	X
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
ZZZZZZ			14:44	
240-23530-2	1	T	14:44	X
240-23530-5	1	T	14:45	X
CCV 240-83616/29	1		14:47	X
CCB 240-83616/30	1		14:57	X
ZZZZZZ			15:00	
ZZZZZZ			15:06	
ZZZZZZ			15:39	
ZZZZZZ			15:39	
CCV 240-83616/35			15:39	
CCB 240-83616/36			15:40	

Prep Types:
T = Total/NA

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Analyst: JK Batch Start Date: 04/25/2013

Reporting Units: mg/L Analytical Batch No.: 83616

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	CCV	12:33	Ammonia (as N)	2.27	2.50	91	90-110		WCNH31000_00020
6	CCB	12:34	Ammonia (as N)	0.20				U	
17	CCV	13:16	Ammonia (as N)	2.54	2.50	102	90-110		WCNH31000_00020
18	CCB	13:38	Ammonia (as N)	0.20				U	
29	CCV	14:47	Ammonia (as N)	2.50	2.50	100	90-110		WCNH31000_00020
30	CCB	14:57	Ammonia (as N)	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 04/24/2013 12:49 End Date: 04/24/2013 15:16

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-83460/1	1		12:49	X
CCB 240-83460/2	1		13:00	X
MB 240-83460/3	1	D	13:10	X
LCS 240-83460/4	2	D	13:21	X
240-23530-5	1	D	13:32	X
240-23530-5 MS	2	D	14:13	X
240-23530-2	1	D	14:24	X
CCV 240-83460/8	1		15:05	X
CCB 240-83460/9	1		15:16	X

Prep Types:
D = Dissolved

FORM XIII-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Analyst: TH Batch Start Date: 04/24/2013

Reporting Units: mg/L Analytical Batch No.: 83460

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	12:49	Dissolved Organic Carbon	25.4	25.0	102	90-110		WC TOC CCV_00130
2	CCB	13:00	Dissolved Organic Carbon	1.0				U	
8	CCV	15:05	Dissolved Organic Carbon	25.4	25.0	102	90-110		WC TOC CCV_00130
9	CCB	15:16	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 04/25/2013 13:26 End Date: 04/25/2013 21:58

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			13:26	
RINSE 240-83727/2			13:35	
ZZZZZZ			13:48	
LCS 240-83727/4	1	T	13:57	X
MB 240-83727/5	1	T	14:03	X
ZZZZZZ			14:06	
240-23653-C-1 DU	1	T	17:01	X
ZZZZZZ			17:18	
240-23653-C-1 MS	1	T	17:41	X
240-23653-C-1 MSD	1	T	18:04	X
ZZZZZZ			18:55	
ZZZZZZ			19:09	
ZZZZZZ			19:22	
ZZZZZZ			19:28	
ZZZZZZ			19:39	
ZZZZZZ			19:52	
ZZZZZZ			19:55	
ZZZZZZ			20:06	
240-23530-2	1	T	20:12	X
240-23530-5	1	T	20:19	X
ZZZZZZ			20:27	
ZZZZZZ			20:34	
ZZZZZZ			20:41	
ZZZZZZ			20:48	
ZZZZZZ			20:57	
ZZZZZZ			21:06	
ZZZZZZ			21:15	
ZZZZZZ			21:19	
ZZZZZZ			21:28	
ZZZZZZ			21:37	
ZZZZZZ			21:46	
ZZZZZZ			21:55	
ZZZZZZ			21:58	

Prep Types:
T = Total/NA

FORM XIII-IN

Report Date: 4/26/2013 : 10:35 AM

batch 83727

Instrument ID: Steve

TestAmerica

310.1, 2320B, 305.1, 2310B, 340.2, 4500F-C

Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
rinse-1	4/25/2013	1:26 PM	-1.00	8.66	2.06	39.61	35.48	4.13	.00	-1.00	-1.00
rinse-2	4/25/2013	1:35 PM	-1.00	8.80	3.88	43.56	35.80	7.76	.00	-1.00	-1.00
PH 7	4/25/2013	1:48 PM	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
LCS 917873	4/25/2013	1:57 PM	-1.00	8.18	.00	81.40	81.40	.00	.00	-1.00	-1.00
MB	4/25/2013	2:03 PM	-1.00	7.06	.00	1.71	1.71	.00	.00	-1.00	-1.00
PH 7A	4/25/2013	2:06 PM	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
du	4/25/2013	5:01 PM	-1.00	7.67	.00	596.00	596.00	.00	.00	-1.00	-1.00
240-23653-C-1	4/25/2013	5:18 PM	-1.00	7.67	.00	599.94	599.94	.00	.00	-1.00	-1.00
ms	4/25/2013	5:41 PM	-1.00	9.05	135.16	943.96	673.64	270.32	.00	-1.00	-1.00
msd	4/25/2013	6:04 PM	-1.00	9.05	129.00	929.51	671.51	258.00	.00	-1.00	-1.00
240-23653-C-2	4/25/2013	6:55 PM	-1.00	7.53	.00	.00	.00	.00	.00	-1.00	-1.00
240-23653-C-3	4/25/2013	7:09 PM	-1.00	7.39	.00	514.93	514.93	.00	.00	-1.00	-1.00
240-23453-F-5	4/25/2013	7:22 PM	-1.00	7.76	.00	344.13	344.13	.00	.00	-1.00	-1.00
240-23453-F-6	4/25/2013	7:28 PM	-1.00	6.59	.00	1.50	1.50	.00	.00	-1.00	-1.00
240-23453-F-7	4/25/2013	7:39 PM	-1.00	7.77	.00	339.39	339.39	.00	.00	-1.00	-1.00
240-23453-F-8	4/25/2013	7:52 PM	-1.00	7.76	.00	351.83	351.83	.00	.00	-1.00	-1.00
PH 7-2	4/25/2013	7:55 PM	-1.00	7.01	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-23453-F-9	4/25/2013	8:06 PM	-1.00	7.80	.00	299.90	299.90	.00	.00	-1.00	-1.00
240-23530-J-2	4/25/2013	8:12 PM	-1.00	6.53	.00	61.46	61.46	.00	.00	-1.00	-1.00
240-23530-J-5	4/25/2013	8:19 PM	-1.00	6.46	.00	36.22	36.22	.00	.00	-1.00	-1.00
du 240-23564-I-1	4/25/2013	8:27 PM	-1.00	7.22	.00	30.15	30.15	.00	.00	-1.00	-1.00
240-23564-I-1	4/25/2013	8:34 PM	-1.00	7.28	.00	30.41	30.41	.00	.00	-1.00	-1.00

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Analyst _____

LCS _____

Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	Acid
240-23565-I-1	4/25/2013	8:41 PM	-1.00	7.39	.00	25.70	25.70	.00	.00	-1.00	-1.00
240-23613-G-1@5	4/25/2013	8:48 PM	-1.00	6.64	.00	69.61	69.61	.00	.00	-1.00	-1.00
240-23419-a-1	4/25/2013	8:57 PM	-1.00	9.15	1.62	12.05	8.81	3.24	.00	-1.00	-1.00
240-23419-a-2	4/25/2013	9:06 PM	-1.00	9.26	1.92	12.93	9.08	3.85	.00	-1.00	-1.00
240-23419-a-3	4/25/2013	9:15 PM	-1.00	9.30	1.77	12.60	9.05	3.55	.00	-1.00	-1.00
PH 7-3	4/25/2013	9:19 PM	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
240-23419-a-4	4/25/2013	9:28 PM	-1.00	9.21	1.66	13.05	9.72	3.32	.00	-1.00	-1.00
240-23419-a-5	4/25/2013	9:37 PM	-1.00	9.27	1.78	12.97	9.40	3.57	.00	-1.00	-1.00
240-23419-a-6	4/25/2013	9:46 PM	-1.00	9.29	1.90	12.05	8.25	3.80	.00	-1.00	-1.00
240-23419-a-7	4/25/2013	9:55 PM	-1.00	9.36	2.40	28.74	23.94	4.80	.00	-1.00	-1.00
PH 7-4	4/25/2013	9:58 PM	-1.00	7.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00

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13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23530-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 04/25/2013 08:59 End Date: 04/25/2013 08:59

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-83518/1	1	T	08:59	X
LCS 240-83518/2	1	T	08:59	X
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
240-23602-A-2 DU	1	T	08:59	X
ZZZZZZ			08:59	
ZZZZZZ			08:59	
240-23530-2	1	T	08:59	X
240-23530-5	1	T	08:59	X
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	
ZZZZZZ			08:59	

Prep Types:
T = Total/NA

FORM XIII-IN

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 20, 2013**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION – VOC / SVOC / PECHLORATE / METALS**
LOCKHEED MARTIN – MRC
SDG 240-23592-1

SAMPLES: 4/Aqueous/VOC

MRC-MW-22B-042313	MRC-MW-57A-042313	MRC-MW-58A-042313
MRC-MW90B-042313	TB-042313	

4/Aqueous/SVOC

MRC-MW-22B-042313	MRC-MW-58A-042313	MRC-MW90B-042313
MRC-MW91A-042313		

2/Aqueous/PERCHLORATE

MRC-MW75A-042313	MRC-MW90B-042313

4/Aqueous/METALS (Sb, As, Ba, Be, Cd Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, and Zn)

MRC-MW-22B-042313	MRC-MW-57A-042313	MRC-MW-59A-042313
MRC-MW75A-042313		

Overview

The sample set for Lockheed Martin – MRC, SDG 240-23592-1 consists of three (3) aqueous environmental samples and one (1) trip blank. The samples were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), perchlorate, and metals as outlined above.

The samples were collected by Tetra Tech on April 1, 2013 and analyzed by Test America (North Canton). All analyses were conducted in accordance with SW-846 Methods 8260B, 8270D, 6010C, 6020A, 7470A, 6850, 9060, dissolved gases by method RSK-175, and standard methods 160.1, 300.0, 310.1, and 350.3 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, internal standard recoveries, ICP interference results, laboratory duplicate results, ICP serial dilution results, chromatographic resolution, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major

- The VOC initial calibration and associated continuing calibration relative response factors (RRFs) were less than the 0.05 quality control limit for tert-butyl alcohol and vinyl acetate on

instrument A3UX15. Only non-detected results were reported for tert-butyl alcohol and vinyl acetate and these results were rejected (UR).

Minor

- The VOC continuing calibration %Ds were greater than the quality control limit of 20% and less than 50% for dichlorodifluoromethane, carbon disulfide, cis-1,3-dichloropropene, trans-1,3-dichloropropene, 1,2,3-trichloropropane, hexachlorobutadiene, and naphthalene for instrument A3UX15 on 04/29/13 @ 12:03. The positive carbon disulfide results for MRC-MW-22B-042313 and MRC-MW90B-042313 were qualified as estimated. No action was taken on the nondetected results in the affected samples.

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Copper[(1)]	0.503 ug/L	2.5 ug/L
Molybdenum[(1)]	1.43 ug/L	7.15 ug/L
Silver[(2)]	0.167 ug/L	0.835 ug/L
Mercury[(3)]	0.110 ug/L	0.55 ug/L

(1) Maximum concentration present in MB 100766/1-A affecting all samples.
(2) Maximum concentration present in CCB 103335/32 affecting all samples.
(3) Maximum concentration present in CCB 101574/4-A affecting all samples.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for copper, silver, and molybenum were qualified (B) as a result of laboratory blank contamination.

- Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Notes

Sample MRC-MW90B-042313 was diluted two fold due to a concentration for trichloroethene greater than the linear calibration range of the instrument. This accounts for the elevated detection limits for the nondetected compounds.

The batch VOC matrix spike / matrix spike duplicate (MS/MSD) had several percent recoveries outside of the quality control limit in the MS and MSD. No action was taken on this basis because the MS/MSD was not performed on a Tetra Tech sample.

The CRDL percent recoveries for mercury on 05/01/13 at 13:00 and at 16:17 were > 120% quality control limit. No validation actions were required as all results were nondetects.

The contract required detection limit (CRDL) percent recovery for copper, nickel, and zinc on 04/30/13 at 12:47 were > 110% quality control limit affecting all samples. No validation actions were required as all results were either qualified as a result of blank contamination or were > 2X CRDL.

The metals MS/MSD performed on sample MRC-MW-59A-042313 had a percent recovery for barium greater than the quality control limit in the MSD. No action was taken on this basis because the post digestion, MS and LCS recoveries were acceptable.

Executive Summary

Laboratory Performance: Two VOC compounds had RRF noncompliances resulting in the rejection of data. Blank contamination resulted in the qualification of data for the metals fraction. A VOC CCAL %D noncompliance resulted in the qualification of VOC results.

Other Factors Affecting Data Quality: Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 04795	NSAMPLE	MRC-MW-22B-042313			MRC-MW-57A-042313			MRC-MW-58A-042313			MRC-MW90B-042313		
SDG: 240-23592-1	LAB_ID	240-23592-7			240-23592-8			240-23592-5			240-23592-2		
FRACTION: OV	SAMP_DATE	4/23/2013			4/23/2013			4/23/2013			4/23/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.46	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.44	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.36	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.56	U	
1,1-DICHLOROETHANE		1.1			0.15	U		0.15	U		0.3	U	
1,1-DICHLOROETHENE		3.4			0.19	U		0.19	U		9.6		
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.26	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.34	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.86	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.012	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.3	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.24	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		1.3	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.48	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.44	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.36	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.28	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.32	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.26	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		1.1	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		2	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.22	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.82	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.36	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.24	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.64	U	
ACETONE		1.1	U		1.1	U		1.1	U		3.5	J	P
BENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.58	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.3	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		1.3	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.82	U	
CARBON DISULFIDE		0.17	J	CP	0.13	U		0.13	U		0.42	J	CP

PROJ_NO: 04795	NSAMPLE	TB-042313
SDG: 240-23592-1	LAB_ID	240-23592-1
FRACTION: OV	SAMP_DATE	4/23/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U	
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U	
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.1	U	
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	
CARBON DISULFIDE	0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-22B-042313			MRC-MW-57A-042313			MRC-MW-58A-042313			MRC-MW90B-042313		
SDG: 240-23592-1	LAB_ID	240-23592-7			240-23592-8			240-23592-5			240-23592-2		
FRACTION: OV	SAMP_DATE	4/23/2013			4/23/2013			4/23/2013			4/23/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.26	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.3	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.36	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.58	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.57	J	P
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.6	U	
CIS-1,2-DICHLOROETHENE		0.19	J	P	0.17	U		0.17	U		3.3		
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.28	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.56	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		0.62	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		3	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.22	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.34	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.6	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.48	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		0.34	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.66	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.48	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.24	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.28	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.28	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
STYRENE		0.11	U		0.11	U		0.11	U		0.22	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.13	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.26	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	7.8	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.58	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.26	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.56	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.38	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.38	U	
TRICHLOROETHENE		1.3			0.17	U		0.17	U		71		
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U		0.42	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.38	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.44	U	

PROJ_NO: 04795	NSAMPLE	TB-042313
SDG: 240-23592-1	LAB_ID	240-23592-1
FRACTION: OV	SAMP_DATE	4/23/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U	
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	U	
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	
TRICHLOROETHENE	0.17	U	
TRICHLOROFLUOROMETHANE	0.21	U	
VINYL ACETATE	0.19	UR	C
VINYL CHLORIDE	0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-22B-042313			MRC-MW-58A-042313			MRC-MW90B-042313			MRC-MW91A-042313		
SDG: 240-23592-1	LAB_ID	240-23592-7			240-23592-5			240-23592-2			240-23592-3		
FRACTION: OS	SAMP_DATE	4/23/2013			4/23/2013			4/23/2013			4/23/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		4.2			0.49	U		3.7			4.7		

PROJ_NO: 04795	NSAMPLE	MRC-MW-22B-042313			MRC-MW-57A-042313			MRC-MW-59A-042313			MRC-MW75A-042313		
SDG: 240-23592-1	LAB_ID	240-23592-7			240-23592-8			240-23592-6			240-23592-4		
FRACTION: M	SAMP_DATE	4/23/2013			4/23/2013			4/23/2013			4/23/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U		0.36	J	P
ARSENIC		0.9	U		2.2	J	P	1.5	J	P	1.8	J	P
BARIUM		130			120			150			540		
BERYLLIUM		0.1	U		0.41	J	P	8.2			9.4		
CADMIUM		0.1	U		0.1	U		0.33	J	P	0.23	J	P
CHROMIUM		0.9	U		1	J	P	0.9	U		0.9	U	
COBALT		95			580			810			240		
COPPER		0.73	B	A	1.7	B	A	4.5			5		
LEAD		0.2	U		0.65	J	P	0.2	U		1.3		
MERCURY		0.1	U		0.1	U		0.1	U		0.1	U	
MOLYBDENUM		0.2	U		1	B	A	0.28	B	A	0.8	B	A
NICKEL		160			440			560			490		
SELENIUM		0.5	U		0.5	U		0.62	J	P	0.5	U	
SILVER		0.1	U		0.1	U		0.1	U		0.21	B	A
THALLIUM		0.2	U		0.2	U		0.2	U		0.26	J	P
VANADIUM		0.8	U		0.8	U		0.8	U		3	J	P
ZINC		260			110			1200			560		

PROJ_NO: 04795	NSAMPLE	MRC-MW75A-042313			MRC-MW90B-042313		
SDG: 240-23592-1	LAB_ID	240-23592-4			240-23592-2		
FRACTION: MISC	SAMP_DATE	4/23/2013			4/23/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.48	J	P

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-22B-042313 | Lab Sample ID: 240-23592-7

Matrix: Water | Lab File ID: UXC1155.D

Analysis Method: 8260B | Date Collected: 04/23/2013 14:13

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	0.17	J	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.19	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.1		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	3.4		1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-22B-042313 | Lab Sample ID: 240-23592-7

Matrix: Water | Lab File ID: UXC1155.D

Analysis Method: 8260B | Date Collected: 04/23/2013 14:13

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.3		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-22B-042313 | Lab Sample ID: 240-23592-7

Matrix: Water | Lab File ID: UXC1155.D

Analysis Method: 8260B | Date Collected: 04/23/2013 14:13

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
1868-53-7	Dibromofluoromethane (Surr)	96		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-22B-042313 Lab Sample ID: 240-23592-7

Matrix: Water Lab File ID: UXC1155.D

Analysis Method: 8260B Date Collected: 04/23/2013 14:13

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 20:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-57A-042313 | Lab Sample ID: 240-23592-8

Matrix: Water | Lab File ID: UXC1156.D

Analysis Method: 8260B | Date Collected: 04/23/2013 15:47

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-57A-042313 | Lab Sample ID: 240-23592-8

Matrix: Water | Lab File ID: UXC1156.D

Analysis Method: 8260B | Date Collected: 04/23/2013 15:47

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-57A-042313 | Lab Sample ID: 240-23592-8

Matrix: Water | Lab File ID: UXC1156.D

Analysis Method: 8260B | Date Collected: 04/23/2013 15:47

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	95		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		63-129
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-57A-042313 | Lab Sample ID: 240-23592-8

Matrix: Water | Lab File ID: UXC1156.D

Analysis Method: 8260B | Date Collected: 04/23/2013 15:47

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 20:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-58A-042313 Lab Sample ID: 240-23592-5

Matrix: Water Lab File ID: UXC1154.D

Analysis Method: 8260B Date Collected: 04/23/2013 10:22

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 19:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-58A-042313 | Lab Sample ID: 240-23592-5

Matrix: Water | Lab File ID: UXC1154.D

Analysis Method: 8260B | Date Collected: 04/23/2013 10:22

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 19:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-58A-042313 | Lab Sample ID: 240-23592-5

Matrix: Water | Lab File ID: UXC1154.D

Analysis Method: 8260B | Date Collected: 04/23/2013 10:22

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 19:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	99		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		63-129
2037-26-5	Toluene-d8 (Surr)	86		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-58A-042313 Lab Sample ID: 240-23592-5

Matrix: Water Lab File ID: UXC1154.D

Analysis Method: 8260B Date Collected: 04/23/2013 10:22

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 19:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW90B-042313 Lab Sample ID: 240-23592-2

Matrix: Water Lab File ID: UXC1153.D

Analysis Method: 8260B Date Collected: 04/23/2013 10:30

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 19:15

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	3.5	J	10	2.2
71-43-2	Benzene	2.0	U	2.0	0.26
108-86-1	Bromobenzene	2.0	U	2.0	0.26
74-97-5	Bromochloromethane	2.0	U	2.0	0.58
75-27-4	Bromodichloromethane	2.0	U	2.0	0.30
75-25-2	Bromoform	2.0	U	2.0	1.3
74-83-9	Bromomethane	2.0	U	2.0	0.82
78-93-3	2-Butanone	10	U	10	1.1
75-15-0	Carbon disulfide	0.42	J	2.0	0.26
56-23-5	Carbon tetrachloride	2.0	U	2.0	0.26
108-90-7	Chlorobenzene	2.0	U	2.0	0.30
75-00-3	Chloroethane	2.0	U	2.0	0.58
110-75-8	2-Chloroethyl vinyl ether	20	U	20	2.0
67-66-3	Chloroform	0.57	J	2.0	0.32
74-87-3	Chloromethane	2.0	U	2.0	0.60
95-49-8	2-Chlorotoluene	2.0	U	2.0	0.22
106-43-4	4-Chlorotoluene	2.0	U	2.0	0.36
156-59-2	cis-1,2-Dichloroethene	3.3		2.0	0.34
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	2.0	U	2.0	0.36
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	1.3
106-93-4	1,2-Dibromoethane	2.0	U	2.0	0.48
74-95-3	Dibromomethane	2.0	U	2.0	0.56
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.26
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.28
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.26
75-71-8	Dichlorodifluoromethane	2.0	U	2.0	0.62
75-34-3	1,1-Dichloroethane	2.0	U	2.0	0.30
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.44
75-35-4	1,1-Dichloroethene	9.6		2.0	0.38
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.36
142-28-9	1,3-Dichloropropane	2.0	U	2.0	0.32
594-20-7	2,2-Dichloropropane	2.0	U	2.0	0.26
563-58-6	1,1-Dichloropropene	2.0	U	2.0	0.26
108-20-3	Diisopropyl ether	10	U	10	3.0
100-41-4	Ethylbenzene	2.0	U	2.0	0.34

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW90B-042313 | Lab Sample ID: 240-23592-2

Matrix: Water | Lab File ID: UXC1153.D

Analysis Method: 8260B | Date Collected: 04/23/2013 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 19:15

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	10	U	10	0.22
87-68-3	Hexachlorobutadiene	2.0	U	2.0	0.60
591-78-6	2-Hexanone	10	U	10	0.82
98-82-8	Isopropylbenzene	2.0	U	2.0	0.26
75-09-2	Methylene Chloride	2.0	U	2.0	0.66
108-10-1	4-Methyl-2-pentanone	10	U	10	0.64
1634-04-4	Methyl tert-butyl ether	2.0	U	2.0	0.34
179601-23-1	m-Xylene & p-Xylene	4.0	U	4.0	0.48
91-20-3	Naphthalene	2.0	U	2.0	0.48
104-51-8	n-Butylbenzene	2.0	U	2.0	0.24
103-65-1	n-Propylbenzene	2.0	U	2.0	0.28
95-47-6	o-Xylene	2.0	U	2.0	0.28
99-87-6	p-Isopropyltoluene	2.0	U	2.0	0.24
135-98-8	sec-Butylbenzene	2.0	U	2.0	0.26
100-42-5	Styrene	2.0	U	2.0	0.22
994-05-8	Tert-amyl-methyl ether (TAME)	10	U	10	0.13
75-65-0	tert-Butyl alcohol	40	U	40	7.8
98-06-6	tert-Butylbenzene	2.0	U	2.0	0.26
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	0.46
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.36
127-18-4	Tetrachloroethene	2.0	U	2.0	0.58
108-88-3	Toluene	2.0	U	2.0	0.26
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	0.38
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.38
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	0.34
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	0.30
71-55-6	1,1,1-Trichloroethane	2.0	U	2.0	0.44
79-01-6	Trichloroethene	71		2.0	0.34
75-69-4	Trichlorofluoromethane	2.0	U	2.0	0.42
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	0.86
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	2.0	U	2.0	0.56
526-73-8	1,2,3-Trimethylbenzene	10	U	10	0.012
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	0.24
108-05-4	Vinyl acetate	4.0	U	4.0	0.38
75-01-4	Vinyl chloride	2.0	U	2.0	0.44

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW90B-042313 Lab Sample ID: 240-23592-2

Matrix: Water Lab File ID: UXC1153.D

Analysis Method: 8260B Date Collected: 04/23/2013 10:30

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 19:15

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	4.0	U	4.0	0.56

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	87		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW90B-042313 Lab Sample ID: 240-23592-2

Matrix: Water Lab File ID: UXC1153.D

Analysis Method: 8260B Date Collected: 04/23/2013 10:30

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 19:15

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: TB-042313 | Lab Sample ID: 240-23592-1

Matrix: Water | Lab File ID: UXC1152.D

Analysis Method: 8260B | Date Collected: 04/23/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: TB-042313 | Lab Sample ID: 240-23592-1

Matrix: Water | Lab File ID: UXC1152.D

Analysis Method: 8260B | Date Collected: 04/23/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: TB-042313 | Lab Sample ID: 240-23592-1

Matrix: Water | Lab File ID: UXC1152.D

Analysis Method: 8260B | Date Collected: 04/23/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	95		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: TB-042313 | Lab Sample ID: 240-23592-1

Matrix: Water | Lab File ID: UXC1152.D

Analysis Method: 8260B | Date Collected: 04/23/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 18:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-22B-042313 | Lab Sample ID: 240-23592-7

Matrix: Water | Lab File ID: 30429027.D

Analysis Method: 8270D | Date Collected: 04/23/2013 14:13

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1020(mL) | Date Analyzed: 04/29/2013 19:39

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	4.2		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		20-110
367-12-4	2-Fluorophenol (Surr)	62		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	60		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	58		21-110
4165-62-2	Phenol-d5 (Surr)	61		21-110
1718-51-0	Terphenyl-d14 (Surr)	54		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW-58A-042313 | Lab Sample ID: 240-23592-5

Matrix: Water | Lab File ID: 30429026.D

Analysis Method: 8270D | Date Collected: 04/23/2013 10:22

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1010(mL) | Date Analyzed: 04/29/2013 19:15

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		20-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	64		21-110
4165-62-2	Phenol-d5 (Surr)	66		21-110
1718-51-0	Terphenyl-d14 (Surr)	55		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW90B-042313 | Lab Sample ID: 240-23592-2

Matrix: Water | Lab File ID: 30429028.D

Analysis Method: 8270D | Date Collected: 04/23/2013 10:30

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1000(mL) | Date Analyzed: 04/29/2013 20:03

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	3.7		1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	65		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	70		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	65		21-110
4165-62-2	Phenol-d5 (Surr)	66		21-110
1718-51-0	Terphenyl-d14 (Surr)	54		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW91A-042313 | Lab Sample ID: 240-23592-3

Matrix: Water | Lab File ID: 30429025.D

Analysis Method: 8270D | Date Collected: 04/23/2013 12:00

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1010(mL) | Date Analyzed: 04/29/2013 18:52

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	4.7		0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		20-110
367-12-4	2-Fluorophenol (Surr)	73		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	68		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	71		21-110
4165-62-2	Phenol-d5 (Surr)	71		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW75A-042313 Lab Sample ID: 240-23592-4

Matrix: Water Lab File ID: 07MAY13-Perc-062.d

Analysis Method: 6850 Date Collected: 04/23/2013 13:35

Extraction Method: Filtration Date Extracted: 05/02/2013 06:30

Sample wt/vol: 4.00(mL) Date Analyzed: 05/08/2013 15:31

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: MRC-MW90B-042313 Lab Sample ID: 240-23592-2

Matrix: Water Lab File ID: 07MAY13-Perc-059.d

Analysis Method: 6850 Date Collected: 04/23/2013 10:30

Extraction Method: Filtration Date Extracted: 05/02/2013 06:30

Sample wt/vol: 4.00(mL) Date Analyzed: 05/08/2013 14:41

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.48	J	0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-22B-042313 Lab Sample ID: 240-23592-7

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 14:13

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	130	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.73	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	160	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	95	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	260	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-22B-042313 Lab Sample ID: 240-23592-7

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 14:13

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-57A-042313 Lab Sample ID: 240-23592-8

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 15:47

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	2.2	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	0.41	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	120	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	1.0	2.0	0.90	ug/L	J		1	6020
7440-50-8	Copper	1.7	2.0	0.50	ug/L	J	B	1	6020
7440-02-0	Nickel	440	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.65	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	580	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	110	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	1.0	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-57A-042313 Lab Sample ID: 240-23592-8

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 15:47

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-59A-042313 Lab Sample ID: 240-23592-6

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 11:44

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	1.5	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	8.2	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.33	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	150	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	4.5	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	560	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	0.62	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	810	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	1200	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.28	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-59A-042313 Lab Sample ID: 240-23592-6

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 11:44

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW75A-042313 Lab Sample ID: 240-23592-4

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 13:35

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.36	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	1.8	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	9.4	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.23	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	540	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	5.0	2.0	0.50	ug/L		B	1	6020
7440-02-0	Nickel	490	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.3	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	240	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.21	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	0.26	2.0	0.20	ug/L	J		1	6020
7440-66-6	Zinc	560	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.80	10	0.20	ug/L	J	B	1	6020
7440-62-2	Vanadium	3.0	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW75A-042313 Lab Sample ID: 240-23592-4

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG ID.:

Matrix: Water Date Sampled: 04/23/2013 13:35

Reporting Basis: WET Date Received: 04/24/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

Appendix C

Support Documentation

HOLDTIME

SDG 240-23592-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-57A-042313	240-23592-8	NM	4/23/2013	5/1/2013	5/1/2013	8	0	8
HG	UG/L	MRC-MW10A-042413	240-23631-2	NM	4/24/2013	5/1/2013	5/1/2013	7	0	7
HG	UG/L	MRC-MW-59A-042313	240-23592-6	NM	4/23/2013	5/1/2013	5/1/2013	8	0	8
HG	UG/L	MRC-MW-50A-042413	240-23631-5	NM	4/24/2013	5/1/2013	5/1/2013	7	0	7
HG	UG/L	MRC-MW-49A-042413	240-23631-6	NM	4/24/2013	5/1/2013	5/1/2013	7	0	7
HG	UG/L	MRC-MW-46A-042413	240-23631-8	NM	4/24/2013	5/1/2013	5/1/2013	7	0	7
HG	UG/L	MRC-MW-22B-042313	240-23592-7	NM	4/23/2013	5/1/2013	5/1/2013	8	0	8
HG	UG/L	MRC-MW17A-042413	240-23631-4	NM	4/24/2013	5/1/2013	5/1/2013	7	0	7
HG	UG/L	MRC-MW-112A-042413	240-23631-7	NM	4/24/2013	5/1/2013	5/1/2013	7	0	7
HG	UG/L	MRC-MW75A-042313	240-23592-4	NM	4/23/2013	5/1/2013	5/1/2013	8	0	8
M	UG/L	MRC-MW10A-042413	240-23631-2	NM	4/24/2013	5/3/2013	5/7/2013	9	4	13
M	UG/L	MRC-MW-46A-042413	240-23631-8	NM	4/24/2013	5/3/2013	5/7/2013	9	4	13
M	UG/L	MRC-MW-57A-042313	240-23592-8	NM	4/23/2013	4/26/2013	4/30/2013	3	4	7
M	UG/L	MRC-MW-50A-042413	240-23631-5	NM	4/24/2013	5/8/2013	5/8/2013	14	0	14
M	UG/L	MRC-MW-49A-042413	240-23631-6	NM	4/24/2013	5/3/2013	5/7/2013	9	4	13

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-49A-042413	240-23631-6	NM	4/24/2013	5/3/2013	5/6/2013	9	3	12
M	UG/L	MRC-MW-46A-042413	240-23631-8	NM	4/24/2013	5/3/2013	5/6/2013	9	3	12
M	UG/L	MRC-MW-22B-042313	240-23592-7	NM	4/23/2013	4/26/2013	4/30/2013	3	4	7
M	UG/L	MRC-MW17A-042413	240-23631-4	NM	4/24/2013	5/8/2013	5/8/2013	14	0	14
M	UG/L	MRC-MW-59A-042313	240-23592-6	NM	4/23/2013	4/26/2013	4/30/2013	3	4	7
M	UG/L	MRC-MW-112A-042413	240-23631-7	NM	4/24/2013	5/3/2013	5/6/2013	9	3	12
M	UG/L	MRC-MW75A-042313	240-23592-4	NM	4/23/2013	4/26/2013	4/30/2013	3	4	7
M	UG/L	MRC-MW10A-042413	240-23631-2	NM	4/24/2013	5/3/2013	5/6/2013	9	3	12
M	UG/L	MRC-MW-112A-042413	240-23631-7	NM	4/24/2013	5/3/2013	5/7/2013	9	4	13
PCL	UG/L	MRC-MW75A-042313	240-23592-4	NM	4/23/2013	5/2/2013	5/8/2013	9	6	15
PCL	UG/L	MRC-MW90B-042313	240-23592-2	NM	4/23/2013	5/2/2013	5/8/2013	9	6	15
PCL	UG/L	MRC-MW17A-042413	240-23631-4	NM	4/24/2013	5/2/2013	5/8/2013	8	6	14
PCL	UG/L	MRC-MW-50A-042413	240-23631-5	NM	4/24/2013	5/2/2013	5/8/2013	8	6	14
PCL	UG/L	MRC-MW-49A-042413	240-23631-6	NM	4/24/2013	5/2/2013	5/8/2013	8	6	14
OS	UG/L	MRC-MW-58A-042313	240-23592-5	NM	4/23/2013	4/25/2013	4/29/2013	2	4	6
OS	UG/L	MRC-MW90B-042313	240-23592-2	NM	4/23/2013	4/25/2013	4/29/2013	2	4	6
OS	UG/L	MRC-MW91A-042313	240-23592-3	NM	4/23/2013	4/25/2013	4/29/2013	2	4	6
OS	UG/L	MRC-MW-22B-042313	240-23592-7	NM	4/23/2013	4/25/2013	4/29/2013	2	4	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MRC-MW17A-042413	240-23631-4	NM	4/24/2013	4/26/2013	5/2/2013	2	6	8
OS	UG/L	MRC-MW11C-042413	240-23631-3	NM	4/24/2013	4/26/2013	5/1/2013	2	5	7
OS	UG/L	MRC-MW10A-042413	240-23631-2	NM	4/24/2013	4/26/2013	5/2/2013	2	6	8
OV	UG/L	MRC-MW-22B-042313	240-23592-7	NM	4/23/2013	4/29/2013	4/29/2013	6	0	6
OV	UG/L	MRC-MW90B-042313	240-23592-2	NM	4/23/2013	4/29/2013	4/29/2013	6	0	6
OV	UG/L	TB-042413	240-23631-1	NM	4/24/2013	5/2/2013	5/2/2013	8	0	8
OV	UG/L	TB-042313	240-23592-1	NM	4/23/2013	4/29/2013	4/29/2013	6	0	6
OV	UG/L	MRC-MW-58A-042313	240-23592-5	NM	4/23/2013	4/29/2013	4/29/2013	6	0	6
OV	UG/L	MRC-MW-57A-042313	240-23592-8	NM	4/23/2013	4/29/2013	4/29/2013	6	0	6
OV	UG/L	MRC-MW-49A-042413	240-23631-6	NM	4/24/2013	5/2/2013	5/2/2013	8	0	8
OV	UG/L	MRC-MW17A-042413	240-23631-4	NM	4/24/2013	5/2/2013	5/2/2013	8	0	8
OV	UG/L	MRC-MW11C-042413	240-23631-3	NM	4/24/2013	5/2/2013	5/2/2013	8	0	8
OV	UG/L	MRC-MW-112A-042413	240-23631-7	NM	4/24/2013	5/2/2013	5/2/2013	8	0	8
OV	UG/L	MRC-MW10A-042413	240-23631-2	NM	4/24/2013	5/8/2013	5/8/2013	14	0	14
OV	UG/L	MRC-MW-50A-042413	240-23631-5	NM	4/24/2013	5/2/2013	5/2/2013	8	0	8

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-23592-1

Job Description: MRC GW Sampling

For:
Tetra Tech, Inc
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Tony Apanavage

Approved for release.
John McFadden
Project Manager I
5/14/2013 10:30 AM

John McFadden, Project Manager I
4101 Shuffel Street NW, North Canton, OH, 44720
john.mcfadden@testamericainc.com
05/14/2013

cc: Samantha Brenner
Vanessa Good
Mike Martin
Dev Murali
Tobrena Sedlmyer
Final Data Tracking

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC GW Sampling

Report Number: 240-23592-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Total Recoverable Metals and the 7470A Total Mercury analyses were performed at the TestAmerica Irvine laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/24/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.3 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-042313 (240-23592-1), MRC-MW90B-042313 (240-23592-2), MRC-MW-58A-042313 (240-23592-5), MRC-MW-22B-042313 (240-23592-7) and MRC-MW-57A-042313 (240-23592-8) were analyzed for volatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 04/29/2013.

Sample MRC-MW90B-042313 (240-23592-2)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW90B-042313 (240-23592-2), MRC-MW91A-042313 (240-23592-3), MRC-MW-58A-042313 (240-23592-5) and MRC-MW-22B-042313 (240-23592-7) were analyzed for semivolatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/25/2013 and analyzed on 04/29/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 83555.bna

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

PERCHLORATE

Samples MRC-MW90B-042313 (240-23592-2) and MRC-MW75A-042313 (240-23592-4) were analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 05/02/2013 and analyzed on 05/08/2013.

Due to the high concentration of Perchlorate, the matrix spike / matrix spike duplicate (MS/MSD) for batch 15484 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

No other difficulties were encountered during the perchlorate analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW75A-042313 (240-23592-4), MRC-MW-59A-042313 (240-23592-6), MRC-MW-22B-042313 (240-23592-7) and MRC-MW-57A-042313 (240-23592-8) were analyzed for total recoverable metals (ICPMS)in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/26/2013 and analyzed on 04/30/2013.

Copper and Molybdenum were detected in method blank MB 440-100766/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Barium failed the recovery criteria high for the MSD of sample MRC-MW-59A-042313MSD (240-23592-6) in batch 440-103335.

The matrix spike duplicate (/MSD) percent recovey and 100766 were outside control limits for Ba. This is attributed to matrix interferences.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW75A-042313 (240-23592-4), MRC-MW-59A-042313 (240-23592-6), MRC-MW-22B-042313 (240-23592-7) and MRC-MW-57A-042313 (240-23592-8) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 05/01/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW Sampling

TestAmerica Job ID: 240-23592-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC GW Sampling

TestAmerica Job ID: 240-23592-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-23592-1	TB-042313	Water	04/23/13 00:00	04/24/13 10:30
240-23592-2	MRC-MW90B-042313	Water	04/23/13 10:30	04/24/13 10:30
240-23592-3	MRC-MW91A-042313	Water	04/23/13 12:00	04/24/13 10:30
240-23592-4	MRC-MW75A-042313	Water	04/23/13 13:35	04/24/13 10:30
240-23592-5	MRC-MW-58A-042313	Water	04/23/13 10:22	04/24/13 10:30
240-23592-6	MRC-MW-59A-042313	Water	04/23/13 11:44	04/24/13 10:30
240-23592-7	MRC-MW-22B-042313	Water	04/23/13 14:13	04/24/13 10:30
240-23592-8	MRC-MW-57A-042313	Water	04/23/13 15:47	04/24/13 10:30

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact: Pat O'Meara	COC No: 006962
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5552	Telephone: (703)842-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (in BUS days)	Analyses	
Phone: (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MRC GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04795-02	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite / Grab	VOCs	Total Metals	1,4-Dioxane	Perchlorate	Sample Specific Notes / Special Instructions:
TB-042313	—	—		X						2							X				
MRC-MW90B-042313	4/23/13	1030		X						3			3				X		X	X	
MRC-MW91A-042313		1200		X									2						X		
MRC-MW75A-042313		1335		X					1				1					X		X	
MRC-MW-58A-042313		1022		X						3			1				X		X		
MRC-MW-59A-042313		1144		X					3									X			MS/MSD
MRC-MW-22B-042313		1413		X					1	3			2				X	X	X		
MRC-MW-57A-042313		1547		X					1	3							X	X			

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are ret
☐ Return to Client ☒ Disposal By Lab

240-23592 Chain of Custody

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	4-23-13 / 1600		TestAmerica	4/23/13 / 1600
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	4/23/13 / 1700		TA	4-24-13 1030
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL 0018-1 (04/10)

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 23592

Client Tetratech Site Name

Cooler unpacked by:

Cooler Received on 4-24-13 Opened on 4-24-13

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   - IR GUN# 1 (CF -0 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C
   - IR GUN# 4G (CF +1 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C
   - IR GUN# 5G (CF +1 °C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C
   - IR GUN# 8 (CF +1 °C) Observed Cooler Temp. 2.3 °C Corrected Cooler Temp. 3.3 °C

☐ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC256691
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.

Sample(s) ____ were received in a broken container.

Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____

were further preserved in Sample Receiving to meet recommended pH level(s). Preservation Lot: Nitric Acid Lot# 100110-HNO3; Sulfuric Acid Lot# 051012-H2SO4; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH.

Time preservative was added to sample(s): ____

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW75A-042313	240-23592-B-4	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-59A-042313	240-23592-A-6	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-59A-042313	240-23592-B-6	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-59A-042313	240-23592-C-6	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-22B-042313	240-23592-D-7	Plastic 500ml - with Nitric Acid	<2		
MRC-MW-57A-042313	240-23592-D-8	Plastic 500ml - with Nitric Acid	<2		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23592-1

Login Number: 23592
List Number: 1
Creator: King, Ronald

List Source: TestAmerica Irvine
List Creation: 04/25/13 02:00 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23592-1

Login Number: 23592
List Number: 1
Creator: Baynes, Jason

List Source: TestAmerica Sacramento
List Creation: 04/25/13 11:23 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042313	240-23592-1	95	105	92	88
MRC-MW90B-042313	240-23592-2	97	103	87	89
MRC-MW-58A-042313	240-23592-5	99	99	86	86
MRC-MW-22B-042313	240-23592-7	96	101	87	81
MRC-MW-57A-042313	240-23592-8	95	99	90	82
	MB 240-83937/5	90	94	89	80
	LCS 240-83937/4	100	91	98	102
	400-74253-A-5 MS	97	86	100	108
	400-74253-A-5 MSD	97	88	100	107

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/04/2013 11:03

Analysis Batch Number: 80603 End Date: 04/04/2013 22:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-80603/1		04/04/2013 11:03	1	BFB102C.D	DB-624 0.18(mm)
STD8260 240-80603/2 IC		04/04/2013 12:03	1	UXC0373A.D	DB-624 0.18(mm)
STD8260 240-80603/3 IC		04/04/2013 12:26	1	UXC0374.D	DB-624 0.18(mm)
STD8260 240-80603/4 ICIS		04/04/2013 12:49	1	UXC0375.D	DB-624 0.18(mm)
STD8260 240-80603/5 IC		04/04/2013 13:11	1	UXC0376.D	DB-624 0.18(mm)
STD8260 240-80603/6 IC		04/04/2013 13:33	1	UXC0377.D	DB-624 0.18(mm)
STD8260 240-80603/7 IC		04/04/2013 13:56	1	UXC0378.D	DB-624 0.18(mm)
STD 240-80603/8 IC		04/04/2013 14:18	1	UXC0379.D	DB-624 0.18(mm)
STD 240-80603/9 IC		04/04/2013 14:41	1	UXC0380.D	DB-624 0.18(mm)
STD 240-80603/10 IC		04/04/2013 15:03	1	UXC0381.D	DB-624 0.18(mm)
STD 240-80603/11 IC		04/04/2013 15:25	1	UXC0382.D	DB-624 0.18(mm)
STD 240-80603/12 IC		04/04/2013 15:47	1	UXC0383.D	DB-624 0.18(mm)
STD 240-80603/13 IC		04/04/2013 16:10	1	UXC0384.D	DB-624 0.18(mm)
ICV 240-80603/14		04/04/2013 16:32	1	UXC0385.D	DB-624 0.18(mm)
ZZZZZ		04/04/2013 16:54	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 17:16	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:01	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:23	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 18:45	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:08	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:30	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 19:52	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:15	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:37	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 20:59	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:21	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 21:44	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:06	1		DB-624 0.18(mm)
ZZZZZ		04/04/2013 22:28	1		DB-624 0.18(mm)
LODV 240-80603/31		04/04/2013 22:51	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab File ID: BFB102C.D BFB Injection Date: 04/04/2013

Instrument ID: A3UX15 BFB Injection Time: 11:03

Analysis Batch No.: 80603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	49.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.6	
175	5.0 - 9.0 % of mass 174	4.6	(5.2)1
176	95.0 - 101.0 % of mass 174	86.0	(96.0)1
177	5.0 - 9.0 % of mass 176	6.2	(7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-80603/2	UXC0373A.D	04/04/2013	12:03
	STD8260 240-80603/3	UXC0374.D	04/04/2013	12:26
	STD8260 240-80603/4	UXC0375.D	04/04/2013	12:49
	STD8260 240-80603/5	UXC0376.D	04/04/2013	13:11
	STD8260 240-80603/6	UXC0377.D	04/04/2013	13:33
	STD8260 240-80603/7	UXC0378.D	04/04/2013	13:56
	STD 240-80603/8	UXC0379.D	04/04/2013	14:18
	STD 240-80603/9	UXC0380.D	04/04/2013	14:41
	STD 240-80603/10	UXC0381.D	04/04/2013	15:03
	STD 240-80603/11	UXC0382.D	04/04/2013	15:25
	STD 240-80603/12	UXC0383.D	04/04/2013	15:47
	STD 240-80603/13	UXC0384.D	04/04/2013	16:10
	ICV 240-80603/14	UXC0385.D	04/04/2013	16:32

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3758 0.3941	0.3899	0.4133	0.3540	0.4174	Ave		0.3908				6.1		15.0			
Chloromethane	0.6039 0.4327	0.5978	0.5373	0.4368	0.4712	Ave		0.5133			0.1000	15.0		15.0			
Vinyl chloride	0.6237 0.5379	0.6092	0.5876	0.5264	0.5741	Ave		0.5765				6.7		15.0			
Bromomethane	0.4209	0.4314	0.4051	0.3104	0.4075	Ave		0.3951				12.0		15.0			
Chloroethane	0.3962 0.2862	0.3791	0.3394	0.2910	0.3709	Ave		0.3438				14.0		15.0			
Trichlorofluoromethane	0.5885 0.5912	0.5710	0.5712	0.4929	0.6010	Ave		0.5693				6.9		15.0			
Acrolein	0.0419 0.0323	0.0497	0.0476	0.0325	0.0372	Qua	0.1460	0.0383	0						0.9950		0.9900
1,1-Dichloroethene	0.3519 0.3606	0.3609	0.3572	0.2984	0.3378	Ave		0.3445				7.0		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2524 0.2900	0.2445	0.2747	0.2381	0.2790	Ave		0.2631				8.0		15.0			
Acetone	0.1434 0.0522	0.0955	0.0855	0.0634	0.0701	Qua	0.0718	0.0777	0						0.9930		0.9900
Iodomethane	0.4972 0.5296	0.5035	0.4984	0.4411	0.5050	Ave		0.4958				5.9		15.0			
Carbon disulfide	0.7450 0.8332	0.6769	0.7300	0.6730	0.8198	Ave		0.7463				9.2		15.0			
Acetonitrile	0.0306	0.0315	0.0280	0.0230	0.0277	Ave		0.0282				12.0		15.0			
Methyl acetate	0.1818 0.1458	0.1524	0.1669	0.1478	0.1570	Ave		0.1586				8.6		15.0			
Methylene Chloride	0.7182 0.3558	0.4886	0.4342	0.3658	0.3849	Lin1	0.3409	0.3514							0.9980		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0095	0.0103	0.0099	0.0088	0.0098	Ave		0.0097				5.7		15.0			
Acrylonitrile	0.0912 0.0744	0.0937	0.0904	0.0837	0.0895	Ave		0.0871				8.1		15.0			
trans-1,2-Dichloroethene	0.3742 0.3678	0.3297	0.3604	0.3404	0.3682	Ave		0.3568				5.0		15.0			
Methyl tert-butyl ether	0.6409 0.6347	0.6106	0.6504	0.5843	0.6672	Ave		0.6313				4.7		15.0			
Hexane	0.0753 0.0716	0.0574	0.0631	0.0649	0.0683	Ave		0.0668				9.6		15.0			
1,1-Dichloroethane	0.6077 0.5862	0.5518	0.5777	0.5469	0.5790	Ave		0.5749			0.1000	3.9		15.0			
Vinyl acetate	0.0375 0.0448	0.0340	0.0387	0.0361	0.0384	Ave		0.0383				9.5		15.0			
2,2-Dichloropropane	0.2820 0.2989	0.2466	0.2774	0.2540	0.3031	Ave		0.2770				8.3		15.0			
cis-1,2-Dichloroethene	0.3786 0.3830	0.3624	0.3856	0.3611	0.3907	Ave		0.3769				3.3		15.0			
2-Butanone	0.1049 0.0815	0.0901	0.0997	0.0809	0.0892	Ave		0.0910				11.0		15.0			
Bromochloromethane	0.1681 0.1632	0.1681	0.1666	0.1611	0.1703	Ave		0.1662				2.1		15.0			
Tetrahydrofuran	0.0754 0.0472	0.0534	0.0519	0.0502	0.0517	Lin1	0.0230	0.0478							0.9980		0.9900
Chloroform	0.5553 0.5900	0.5493	0.5781	0.5446	0.5856	Ave		0.5671				3.5		15.0			
1,1,1-Trichloroethane	0.3892 0.4491	0.3651	0.4122	0.3938	0.4623	Ave		0.4120				9.1		15.0			
Cyclohexane	0.5441 0.5640	0.4880	0.5511	0.5195	0.5871	Ave		0.5423				6.4		15.0			
1,1-Dichloropropene	0.4238 0.4742	0.4031	0.4377	0.4305	0.4591	Ave		0.4381				5.8		15.0			
Carbon tetrachloride	0.2849 0.3778	0.2724	0.3174	0.3147	0.3790	Ave		0.3243				14.0		15.0			
Benzene	1.4580 1.4268	1.3388	1.3981	1.3148	1.3877	Ave		1.3874				3.9		15.0			
1,2-Dichloroethane	0.4633 0.3944	0.3774	0.4044	0.3884	0.3961	Ave		0.4040				7.5		15.0			
Trichloroethene	0.3513 0.3563	0.3081	0.3439	0.3321	0.3468	Ave		0.3397				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.5180 0.5382	0.4254	0.4867	0.4821	0.5531	Ave		0.5006				9.2		15.0			
1,2-Dichloropropane	0.3010 0.3168	0.2890	0.3064	0.2849	0.3077	Ave		0.3010				4.0		15.0			
Dibromomethane	0.1603 0.1625	0.1447	0.1750	0.1592	0.1690	Ave		0.1618				6.3		15.0			
1,4-Dioxane	0.0020	0.0020	0.0025	0.0024	0.0029	Lin1	-0.059	0.0028							0.9930		0.9900
Bromodichloromethane	0.2650 0.3664	0.2471	0.2829	0.3060	0.3402	Ave		0.3013				15.0		15.0			
2-Chloroethyl vinyl ether	0.1104 0.1385	0.1078	0.1112	0.1185	0.1295	Ave		0.1193				10.0		15.0			
cis-1,3-Dichloropropene	0.2620 0.3992	0.2387	0.2998	0.3255	0.3639	Lin1	-0.227	0.3859							0.9940		0.9900
4-Methyl-2-pentanone	0.1544 0.1640	0.1414	0.1448	0.1483	0.1661	Ave		0.1532				6.6		15.0			
Toluene	1.9960 2.3293	1.7293	1.9506	2.0148	2.1480	Ave		2.0280				9.9		15.0			
trans-1,3-Dichloropropene	0.2620 0.4670	0.2642	0.3375	0.3600	0.4164	Lin1	-0.310	0.4480							0.9920		0.9900
Ethyl methacrylate	0.2686 0.4156	0.2474	0.3208	0.3543	0.3822	Lin1	-0.235	0.4050							0.9960		0.9900
1,1,2-Trichloroethane	0.3286 0.3340	0.2823	0.3359	0.3272	0.3309	Ave		0.3232				6.3		15.0			
Tetrachloroethene	0.3945 0.4112	0.3663	0.3803	0.3812	0.4099	Ave		0.3905				4.6		15.0			
1,3-Dichloropropane	0.6140 0.6073	0.5440	0.5862	0.5967	0.5908	Ave		0.5899				4.2		15.0			
2-Hexanone	0.1194 0.1590	0.1477	0.1415	0.1377	0.1563	Ave		0.1436				10.0		15.0			
Dibromochloromethane	0.2101 0.3476	0.2196	0.2501	0.2665	0.3182	Lin1	-0.211	0.3346							0.9920		0.9900
1,2-Dibromoethane	0.2824 0.3269	0.2752	0.2975	0.3193	0.3275	Ave		0.3048				7.5		15.0			
Chlorobenzene	1.3284 1.3321	1.1580	1.2562	1.2594	1.3222	Ave		1.2760			0.3000	5.3		15.0			
1,1,1,2-Tetrachloroethane	0.3104 0.4082	0.2968	0.3249	0.3625	0.4179	Ave		0.3534				14.0		15.0			
Ethylbenzene	0.6234 0.7378	0.5905	0.6478	0.6911	0.7292	Ave		0.6700				8.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.4760 1.6350	1.4165	1.6202	1.7329	1.8766	Ave		1.6262				10.0		15.0			
o-Xylene	0.6991 0.8839	0.7352	0.8046	0.8354	0.9459	Ave		0.8173				11.0		15.0			
Styrene	1.0524 1.5219	1.0870	1.2863	1.3664	1.5309	Lin1	-0.698	1.5257							0.9980		0.9900
Bromoform	0.1084 0.1723	0.1122	0.1215	0.1306	0.1665	Lin1	-0.104	0.1679			0.1000				0.9910		0.9900
Isopropylbenzene	1.6124 2.1535	1.7565	1.9538	2.0635	2.3647	Ave		1.9841				14.0		15.0			
Bromobenzene	0.9908 1.0140	0.8754	0.8674	0.9118	0.8983	Ave		0.9263				6.6		15.0			
1,1,2,2-Tetrachloroethane	0.7670 0.6991	0.6731	0.6835	0.6571	0.6660	Ave		0.6910			0.3000	5.8		15.0			
1,2,3-Trichloropropane	0.2675 0.2215	0.2200	0.2100	0.2039	0.2004	Ave		0.2206				11.0		15.0			
trans-1,4-Dichloro-2-butene	0.0532 0.1446	0.0504	0.0725	0.0764	0.0953	Qua	0.0205	0.0478	0.0024						1.0000		0.9900
n-Propylbenzene	0.8938 1.0619	0.8295	0.8962	0.9220	0.9458	Ave		0.9249				8.4		15.0			
2-Chlorotoluene	0.8948 0.9420	0.8030	0.9105	0.8818	0.8761	Ave		0.8847				5.3		15.0			
1,3,5-Trimethylbenzene	2.3637 3.0606	2.2779	2.7920	2.9045	2.9800	Ave		2.7298				12.0		15.0			
4-Chlorotoluene	2.8707 3.3057	2.6365	2.8757	2.8991	2.9231	Ave		2.9185				7.4		15.0			
tert-Butylbenzene	2.0406 2.5505	1.9558	2.2236	2.3662	2.4726	Ave		2.2682				10.0		15.0			
1,2,4-Trimethylbenzene	2.6910 3.0195	2.5908	2.8639	2.8766	3.0744	Ave		2.8527				6.5		15.0			
sec-Butylbenzene	3.0177 3.4449	2.9633	3.3111	3.4464	3.6064	Ave		3.2983				7.8		15.0			
1,3-Dichlorobenzene	1.7505 1.8014	1.6644	1.7758	1.6976	1.7538	Ave		1.7406				2.9		15.0			
p-Isopropyltoluene	2.7342 2.8602	2.4916	2.8163	2.9138	3.1090	Ave		2.8209				7.3		15.0			
1,4-Dichlorobenzene	2.0956 1.9331	1.8280	1.8825	1.7472	1.8784	Ave		1.8941				6.2		15.0			
1,2-Dichlorobenzene	1.7673 1.5793	1.6347	1.6997	1.6356	1.7303	Ave		1.6745				4.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.3598 2.4608	2.2051	2.5080	2.5677	2.8318	Ave		2.4889				8.5		15.0			
1,2-Dibromo-3-Chloropropane	0.0657 0.0625	0.0766	0.0580	0.0686	0.0797	Ave		0.0685				12.0		15.0			
1,3,5-Trichlorobenzene	1.1581 0.7383	1.1241	1.1550	1.0904	1.1578	Ave		1.0706				15.0		15.0			
1,2,4-Trichlorobenzene	0.6758	0.7179	0.7878	0.7472	0.8444	Ave		0.7546				8.6		15.0			
Hexachlorobutadiene	0.6335	0.5913	0.5592	0.5057	0.5165	Ave		0.5612				9.4		15.0			
Naphthalene	1.0297	1.1357	1.4043	1.4586	1.6538	Lin1	-0.795	1.6305							0.9960		0.9900
1,2,3-Trichlorobenzene	0.5938	0.6806	0.6964	0.6569	0.6546	Ave		0.6565				6.0		15.0			
Dibromofluoromethane (Surr)	0.3212 0.2970	0.2817	0.2824	0.2715	0.2942	Ave		0.2913				5.9		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3329 0.3131	0.3061	0.3217	0.2919	0.3108	Ave		0.3128				4.4		15.0			
Toluene-d8 (Surr)	1.6720 1.8441	1.4898	1.5881	1.6379	1.7709	Ave		1.6671				7.6		15.0			
4-Bromofluorobenzene (Surr)	0.5112 0.5212	0.4987	0.5148	0.4955	0.5712	Ave		0.5188				5.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-80603/7	UXC0378.D
Level 2	STD8260 240-80603/6	UXC0377.D
Level 3	STD8260 240-80603/5	UXC0376.D
Level 4	STD8260 240-80603/4	UXC0375.D
Level 5	STD8260 240-80603/3	UXC0374.D
Level 6	STD8260 240-80603/2	UXC0373A.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	54281 2671351	111647	315472	612270	1320135	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	87221 2932821	171156	410136	755402	1490257	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	90084 3646043	174429	448535	910427	1815619	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	60792	123523	309237	536745	1288825	1.00	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	57222 1939853	108559	259106	503212	1172903	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	85003 4007156	163491	436047	852366	1900520	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Qua	60508 2188395	142315	363468	562867	1175631	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	50825 2444441	103328	272671	516040	1068324	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	36448 1965522	70005	209727	411728	882332	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Qua	41437 707021	54698	130552	219202	443563	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	71808 3589348	144182	380440	762887	1596939	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	107608 5647776	193818	557304	1163932	2592649	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	44235	90109	214088	397796	877589	10.0	20.0	50.0	100	200
Methyl acetate	FB	Ave	52519 1976826	87258	254849	511378	993247	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	103727 2411358	139915	331483	632624	1217366	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	27571	58766	150997	304259	621537	20.0	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	26338 1008263	53653	138026	289578	566046	2.00 80.0	4.00	10.0	20.0	40.0
trans-1,2-Dichloroethene	FB	Ave	54053 2492750	94410	275110	588790	1164317	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	92573 4302100	174821	496470	1010488	2110142	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	10883 485484	16430	48173	112324	216056	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	87778 3973500	158005	441003	945915	1830936	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	5416 303463	9742	29528	62456	121528	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	40729 2026035	70603	211764	439337	958452	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	54689 2595845	103777	294324	624550	1235730	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	30308 1104785	51621	152213	279716	563899	2.00 80.0	4.00	10.0	20.0	40.0
Bromochloromethane	FB	Ave	24281 1106320	48133	127148	278570	538571	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Linl	10888 319926	15290	39623	86873	163343	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	80202 3998867	157292	441301	941809	1851795	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	56213 3044165	104528	314700	681095	1462118	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	78582 3822610	139736	420731	898434	1856621	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	61215 3214457	115424	334111	744542	1451922	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	41142 2561023	77991	242269	544212	1198439	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	210583 9670976	383345	1067319	2273858	4388571	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	66913 2673503	108050	308705	671722	1252574	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	50741 2415156	88207	262506	574270	1096701	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	74811 3648018	121816	371567	833848	1749289	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43481 2147458	82744	233906	492649	972957	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	23148 1101620	41437	133579	275319	534465	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Lin1	14368	28653	97278	207802	456726	50.0	100	250	500	1000
Bromodichloromethane	FB	Ave	38268 2483374	70762	215959	529245	1075797	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	31897 1878072	61728	169791	409951	819145	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Lin1	37843 2705668	68349	228889	562927	1150799	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	44600 2223643	80981	221149	512791	1050664	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	192498 10374585	335635	999248	2282849	4486991	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Lin1	25269 2080220	51284	172879	407902	869904	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Lin1	25909 1851096	48026	164320	401441	798354	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	31689 1487736	54791	172079	370752	691165	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	38043 1831312	71087	194819	431900	856200	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	59219 2704806	105584	300304	676120	1234250	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	23039 1416027	57319	144925	312066	653134	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Lin1	20266 1548407	42630	128097	301937	664794	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	27236 1456100	53404	152421	361744	684048	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	128109 5933185	224744	643524	1426894	2761984	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	29934 1818217	57601	166423	410673	872956	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	60118 3286200	114605	331842	783064	1523252	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	284699 14564382	549834	1660008	3926757	7840413	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	67420 3937106	142693	412176	946532	1975850	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Lin1	101493 6778584	210975	658962	1548148	3197923	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Lin1	10452 767541	21784	62233	147934	347777	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	155504 9591628	340910	1000915	2337960	4939757	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	50441 2309180	95029	261383	617538	1223028	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	39047 1592000	73074	205973	445045	906648	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	13620 504429	23883	63279	138117	272793	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Qua	2707 329232	5468	21841	51724	129761	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	45505 2418232	90052	270063	624441	1287610	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	45554 2145247	87171	274367	597254	1192754	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	120337 6969911	247280	841365	1967217	4057094	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	146149 7528191	286215	866599	1963537	3979571	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	103890 5808396	212316	670083	1602636	3366304	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	137002 6876405	281254	863051	1948323	4185655	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	153633 7845243	321691	997810	2334194	4909841	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	89119 4102465	180680	535145	1149747	2387647	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	139202 6513520	270484	848693	1973526	4232714	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	106686 4402295	198448	567289	1183375	2557289	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	89974 3596503	177459	512209	1107802	2355646	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	120138 5604065	239383	755792	1739079	3855247	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	3345 142316	8314	17478	46449	108470	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	58960 1681448	122026	348074	738521	1576326	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	34405	77932	237398	506103	1149600	1.00	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 12:03 Calibration End Date: 04/04/2013 13:56 Calibration ID: 14376

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	32254	64187	168517	342493	703195	1.00	2.00	5.00	10.0	20.0
Naphthalene	DCB	Linl	52421	123293	423179	987933	2251541	1.00	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	30231	73879	209875	444919	891163	1.00	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	46392 2012983	80652	215581	469566	930548	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	48086 2122132	87655	245590	504909	983002	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	161255 8213858	289151	813532	1855747	3699236	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	49303 2321526	96796	263742	561374	1193146	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:
Ave = Average ISTD
Linl = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.9601 0.7242	0.9050	0.8719	0.8759	0.8132	Ave		0.8584				9.5		15.0			
Ethyl ether	0.3412 0.2934	0.3226	0.3378	0.3107	0.3010	Ave		0.3178				6.1		15.0			
3-Chloro-1-propene	0.1577 0.1521	0.1355	0.1441	0.1436	0.1526	Ave		0.1476				5.4		15.0			
Diisopropyl ether	0.2710 0.3092	0.2719	0.2883	0.2894	0.3057	Ave		0.2893				5.6		15.0			
2-Chloro-1,3-butadiene	0.5134 0.5286	0.4490	0.5190	0.5156	0.5192	Ave		0.5075				5.7		15.0			
Ethyl-t-butyl ether (ETBE)	0.5996 0.6507	0.6278	0.6422	0.6520	0.6730	Ave		0.6409				3.9		15.0			
Ethyl acetate	0.1671 0.1520	0.1351	0.1372	0.1445	0.1460	Ave		0.1470				7.9		15.0			
Propionitrile	0.0279 0.0276	0.0303	0.0278	0.0267	0.0286	Ave		0.0282				4.4		15.0			
Methacrylonitrile	0.1142 0.1154	0.1292	0.1216	0.1061	0.1151	Ave		0.1169				6.7		15.0			
Isobutyl alcohol	0.0041 0.0040	0.0039	0.0038	0.0045	0.0043	Ave		0.0041				6.0		15.0			
Tert-amyl-methyl ether (TAME)	0.4454 0.5069	0.4734	0.4860	0.4960	0.5048	Ave		0.4854				4.8		15.0			
n-Heptane	0.0775 0.0685	0.0576	0.0627	0.0688	0.0669	Ave		0.0670				10.0		15.0			
n-Butanol	0.0026 0.0025	0.0026	0.0028	0.0029	0.0027	Ave		0.0027				5.4		15.0			
Methyl methacrylate	0.1572 0.1432	0.1218	0.1256	0.1264	0.1350	Ave		0.1349				9.9		15.0			
2-Nitropropane	0.0187 0.0239	0.0191	0.0171	0.0186	0.0192	Ave		0.0194				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0812 0.0946	0.0685	0.0862	0.0895	0.0990	Ave		0.0865				12.0		15.0			
1,2,3-Trimethylbenzene	2.5686 3.4874	2.5916	3.0529	3.0965	3.4820	Ave		3.0465				13.0		15.0			
2-Methylnaphthalene	0.2129 0.6051	0.2387	0.2880	0.4178	0.5799	Qua	-1.627	0.5468	0.0010						0.9970		0.9900
n-Butyl acetate	0.1485 0.2372	0.1744	0.1786	0.2091	0.2206	Lin1	-0.239	0.2320							0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 240-80603/13	UXC0384.D
Level 2	STD 240-80603/12	UXC0383.D
Level 3	STD 240-80603/11	UXC0382.D
Level 4	STD 240-80603/10	UXC0381.D
Level 5	STD 240-80603/9	UXC0380.D
Level 6	STD 240-80603/8	UXC0379.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	128219 4759915	238116	610234	1264054	2494089	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	45562 1928356	84876	236417	448404	923122	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	21063 999436	35650	100832	207287	467983	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	180962 10162124	357680	1008699	2088661	4688601	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	68560 3474271	118133	363216	744180	1592517	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	80083 4276942	165169	449491	940958	2064046	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl acetate	FB	Ave	44621 1997979	71082	192095	417144	895470	2.00 80.0	4.00	10.0	20.0	40.0
Propionitrile	FB	Ave	7461 362543	15955	38878	77078	175368	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	15246 758391	34000	85112	153143	352988	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	11078 528247	20382	53350	128473	262747	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	59486 3331366	124564	340138	715830	1548164	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	10356 449987	15157	43911	99327	205046	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Ave	6884 326800	13603	38627	83049	168061	20.0 800	40.0	100	200	400
Methyl methacrylate	FB	Ave	20992 941114	32055	87919	182417	414030	1.00 40.0	2.00	5.00	10.0	20.0
2-Nitropropane	FB	Ave	5003 313582	10051	23899	53814	117630	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Ave	34436 2080247	59435	195715	457197	1003722	10.0 400	20.0	50.0	100	200

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 80603

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/04/2013 14:18 Calibration End Date: 04/04/2013 16:10 Calibration ID: 14378

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCB	Ave	108979 7668023	224868	693285	1581338	3531405	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCB	Qua	18063 2660872	41419	130820	426780	1176215	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Lin1	39654 3118307	91759	249952	603511	1353022	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:
Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.3734		1.00	0.0100	-4.4	50.0
Chloromethane	Ave	0.5133	0.5639	0.1000	1.00	0.0100	9.9	50.0
Vinyl chloride	Ave	0.5765	0.6098		1.00	0.0100	5.8	20.0
Bromomethane	Ave	0.3951	0.3863		1.00	0.0100	-2.2	50.0
Chloroethane	Ave	0.3438	0.3863		1.00	0.0100	12.4	50.0
Trichlorofluoromethane	Ave	0.5693	0.6223		1.00	0.0100	9.3	50.0
Acrolein	Qua		0.0606		20.0	0.0300	48.3	50.0
1,1-Dichloroethene	Ave	0.3445	0.4197		1.00	0.0100	21.8*	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.3676		1.00	0.0100	39.7	50.0
Acetone	Qua		0.0747		10.0	0.0200	-0.2	50.0
Iodomethane	Ave	0.4958	0.6219		1.00	0.0100	25.4	50.0
Carbon disulfide	Ave	0.7463	1.004		1.00	0.0100	34.5	50.0
Acetonitrile	Ave	0.0282	0.0333		20.0	0.0300	18.3	50.0
Methyl acetate	Ave	0.1586	0.1827		10.0	0.0100	15.2	50.0
Methylene Chloride	Lin1		0.4258		1.00	0.0100	11.5	50.0
tert-Butyl alcohol	Ave	0.0097	0.0098		50.0	0.200	1.3	50.0
Acrylonitrile	Ave	0.0871	0.0938		20.0	0.0300	7.6	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3791		1.00	0.0100	6.2	50.0
Methyl tert-butyl ether	Ave	0.6313	0.6624		1.00	0.0100	4.9	50.0
Hexane	Ave	0.0668	0.0850		1.00	0.0100	27.3*	20.0
1,1-Dichloroethane	Ave	0.5749	0.6173	0.1000	1.00	0.0100	7.4	50.0
Vinyl acetate	Ave	0.0383	0.0347		2.00	0.0100	-9.4	50.0
2,2-Dichloropropane	Ave	0.2770	0.2681		1.00	0.0100	-3.2	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.4011		1.00	0.0100	6.4	50.0
2-Butanone	Ave	0.0910	0.0883		10.0	0.0200	-3.0	50.0
Bromochloromethane	Ave	0.1662	0.1613		1.00	0.0100	-3.0	50.0
Tetrahydrofuran	Lin1		0.0486		5.00	0.0100	-3.0	50.0
Chloroform	Ave	0.5671	0.6009		1.00	0.0100	6.0	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4343		1.00	0.0100	5.4	50.0
Cyclohexane	Ave	0.5423	0.6246		1.00	0.0100	15.2	50.0
1,1-Dichloropropene	Ave	0.4381	0.4705		1.00	0.0100	7.4	50.0
Carbon tetrachloride	Ave	0.3243	0.3480		1.00	0.0100	7.3	50.0
Benzene	Ave	1.387	1.441		1.00	0.0100	3.9	50.0
1,2-Dichloroethane	Ave	0.4040	0.4058		1.00	0.0100	0.4	50.0
Trichloroethene	Ave	0.3397	0.3347		1.00	0.0100	-1.5	50.0
Methylcyclohexane	Ave	0.5006	0.5473		1.00	0.0100	9.3	50.0
1,2-Dichloropropane	Ave	0.3010	0.2966		1.00	0.0100	-1.5	20.0
Dibromomethane	Ave	0.1618	0.1715		1.00	0.0100	6.0	50.0
Bromodichloromethane	Ave	0.3013	0.3059		1.00	0.0100	1.5	50.0
2-Chloroethyl vinyl ether	Ave	0.1193	0.1081		10.0	0.0100	-9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.2826		1.00	0.0100	-20.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1608		10.0	0.0200	5.0	50.0
Toluene	Ave	2.028	2.055		1.00	0.0100	1.3	20.0
trans-1,3-Dichloropropene	Lin1		0.3234		1.00	0.0100	-20.9	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.3026		1.00	0.0100	-6.4	50.0
Tetrachloroethene	Ave	0.3905	0.3729		1.00	0.0100	-4.5	50.0
1,3-Dichloropropane	Ave	0.5899	0.5712		1.00	0.0100	-3.2	50.0
2-Hexanone	Ave	0.1436	0.1562		10.0	0.0200	8.8	50.0
Dibromochloromethane	Lin1		0.2410		1.00	0.0100	-21.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.3045		1.00	0.0100	-0.1	50.0
Chlorobenzene	Ave	1.276	1.287	0.3000	1.00	0.0100	0.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3671		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.7059		1.00	0.0100	5.4	20.0
m-Xylene & p-Xylene	Ave	1.626	1.762		2.00	0.0200	8.3	50.0
o-Xylene	Ave	0.8173	0.9066		1.00	0.0100	10.9	50.0
Styrene	Lin1		1.454		1.00	0.0100	-0.1	50.0
Bromoform	Lin1		0.1234	0.1000	1.00	0.0100	-20.3	50.0
Isopropylbenzene	Ave	1.984	2.244		1.00	0.0100	13.1	50.0
Bromobenzene	Ave	0.9263	0.8726		1.00	0.0100	-5.8	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6194	0.3000	1.00	0.0100	-10.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1915		1.00	0.0100	-13.2	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0862		1.00	0.0200	-7.6	50.0
n-Propylbenzene	Ave	0.9249	0.9564		1.00	0.0100	3.4	50.0
2-Chlorotoluene	Ave	0.8847	0.8704		1.00	0.0100	-1.6	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.869		1.00	0.0100	5.1	50.0
4-Chlorotoluene	Ave	2.918	2.862		1.00	0.0100	-1.9	50.0
tert-Butylbenzene	Ave	2.268	2.336		1.00	0.0100	3.0	50.0
1,2,4-Trimethylbenzene	Ave	2.853	3.027		1.00	0.0100	6.1	50.0
sec-Butylbenzene	Ave	3.298	3.499		1.00	0.0100	6.1	50.0
1,3-Dichlorobenzene	Ave	1.741	1.755		1.00	0.0100	0.8	50.0
p-Isopropyltoluene	Ave	2.821	3.116		1.00	0.0100	10.5	50.0
1,4-Dichlorobenzene	Ave	1.894	1.801		1.00	0.0100	-4.9	50.0
1,2-Dichlorobenzene	Ave	1.674	1.709		1.00	0.0100	2.1	50.0
n-Butylbenzene	Ave	2.489	2.779		1.00	0.0100	11.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0607		2.00	0.0100	-11.4	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.7228		1.00	0.0100	-4.2	50.0
Hexachlorobutadiene	Ave	0.5612	0.4851		1.00	0.0100	-13.6	50.0
Naphthalene	Lin1		1.287		1.00	0.0100	-16.2	50.0
1,2,3-Trichlorobenzene	Ave	0.6565	0.6321		1.00	0.0100	-3.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2758		0.00842	0.00890	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.3017		0.00858	0.00890	-3.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.667	1.608		0.00858	0.00890	-3.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5350		0.00918	0.00890	3.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-80603/14 Calibration Date: 04/04/2013 16:32

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC0385.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3178	0.3272		2.00	0.0100	3.0	50.0
Diisopropyl ether	Ave	0.2893	0.2870		10.0	0.0100	-0.8	50.0
Isobutyl alcohol	Ave	0.0041	0.0047		50.0	0.500	14.7	50.0
Cyclohexanone	Ave	0.0865	0.0130		20.0	0.200	-85.0*	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.219		0.0106	0.0100	5.7	50.0

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Instrument ID: A3UX15 Start Date: 04/29/2013 09:43

Analysis Batch Number: 83937 End Date: 04/29/2013 21:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-83937/1		04/29/2013 09:43	1	BFB119B.D	DB-624 0.18(mm)
CCV 240-83937/3		04/29/2013 11:40	1	UXC1133.D	DB-624 0.18(mm)
CCVIS 240-83937/2		04/29/2013 12:03	1	UXC1134.D	DB-624 0.18(mm)
LCS 240-83937/4		04/29/2013 12:25	1	UXC1135.D	DB-624 0.18(mm)
MB 240-83937/5		04/29/2013 13:10	1	UXC1137.D	DB-624 0.18(mm)
ZZZZZ		04/29/2013 13:39	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 14:01	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 14:23	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 14:46	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 15:08	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 15:31	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 15:53	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 16:16	6.67		DB-624 0.18(mm)
ZZZZZ		04/29/2013 17:01	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 17:24	7.69		DB-624 0.18(mm)
ZZZZZ		04/29/2013 17:46	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 18:08	20		DB-624 0.18(mm)
ZZZZZ		04/29/2013 18:31	1		DB-624 0.18(mm)
240-23592-1	TB-042313	04/29/2013 18:53	1	UXC1152.D	DB-624 0.18(mm)
240-23592-2	MRC-MW90B-042313	04/29/2013 19:15	2	UXC1153.D	DB-624 0.18(mm)
240-23592-5	MRC-MW-58A-042313	04/29/2013 19:37	1	UXC1154.D	DB-624 0.18(mm)
240-23592-7	MRC-MW-22B-042313	04/29/2013 20:00	1	UXC1155.D	DB-624 0.18(mm)
240-23592-8	MRC-MW-57A-042313	04/29/2013 20:22	1	UXC1156.D	DB-624 0.18(mm)
ZZZZZ		04/29/2013 20:44	1		DB-624 0.18(mm)
400-74253-A-5 MS		04/29/2013 21:06	6.67	UXC1158.D	DB-624 0.18(mm)
400-74253-A-5 MSD		04/29/2013 21:29	6.67	UXC1159.D	DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab File ID: BFB119B.D BFB Injection Date: 04/29/2013

Instrument ID: A3UX15 BFB Injection Time: 09:43

Analysis Batch No.: 83937

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.2	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.5	(0.6)1
174	50.0 - 120.00 % of mass 95	86.5	
175	5.0 - 9.0 % of mass 174	6.9	(8.0)1
176	95.0 - 101.0 % of mass 174	85.5	(98.8)1
177	5.0 - 9.0 % of mass 176	6.0	(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-83937/3	UXC1133.D	04/29/2013	11:40
	CCVIS 240-83937/2	UXC1134.D	04/29/2013	12:03
	LCS 240-83937/4	UXC1135.D	04/29/2013	12:25
	MB 240-83937/5	UXC1137.D	04/29/2013	13:10
TB-042313	240-23592-1	UXC1152.D	04/29/2013	18:53
MRC-MW90B-042313	240-23592-2	UXC1153.D	04/29/2013	19:15
MRC-MW-58A-042313	240-23592-5	UXC1154.D	04/29/2013	19:37
MRC-MW-22B-042313	240-23592-7	UXC1155.D	04/29/2013	20:00
MRC-MW-57A-042313	240-23592-8	UXC1156.D	04/29/2013	20:22
	400-74253-A-5 MS	UXC1158.D	04/29/2013	21:06
	400-74253-A-5 MSD	UXC1159.D	04/29/2013	21:29

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCV 240-83937/3 Calibration Date: 04/29/2013 11:40

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 14:18

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 16:10

Lab File ID: UXC1133.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.8584	0.8032		2.00	0.0100	-6.4	50.0
Ethyl ether	Ave	0.3178	0.3319		2.00	0.0100	4.4	50.0
3-Chloro-1-propene	Ave	0.1476	0.1599		2.00	0.0100	8.3	50.0
Diisopropyl ether	Ave	0.2893	0.3008		10.0	0.0500	4.0	50.0
2-Chloro-1,3-butadiene	Ave	0.5075	0.5160		2.00	0.0100	1.7	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.6409	0.6463		5.00	0.0100	0.8	50.0
Ethyl acetate	Ave	0.1470	0.1540		4.00	0.0200	4.8	50.0
Propionitrile	Ave	0.0282	0.0275		4.00	0.0200	-2.4	50.0
Methacrylonitrile	Ave	0.1169	0.1123		2.00	0.0100	-4.0	50.0
Isobutyl alcohol	Ave	0.0041	0.0043		50.0	0.200	4.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.4854	0.5031		5.00	0.0100	3.6	50.0
n-Heptane	Ave	0.0670	0.0688		1.00	0.0100	2.7	50.0
n-Butanol	Ave	0.0027	0.0027		50.0	0.200	2.6	50.0
Methyl methacrylate	Ave	0.1349	0.1271		2.00	0.0100	-5.8	50.0
2-Nitropropane	Ave	0.0194	0.0271		2.00	0.0200	39.7	50.0
Cyclohexanone	Ave	0.0865	0.0681		20.0	0.100	-21.3	50.0
1,2,3-Trimethylbenzene	Ave	3.046	3.269		0.0107	0.0100	7.3	50.0
2-Methylnaphthalene	Qua		0.2155		5.00	0.0200	-46.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVIS 240-83937/2 Calibration Date: 04/29/2013 12:03

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC1134.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3908	0.2916		1.00	0.0100	-25.4	50.0
Chloromethane	Ave	0.5133	0.4385	0.1000	1.00	0.0100	-14.6	50.0
Vinyl chloride	Ave	0.5765	0.5239		1.00	0.0100	-9.1	20.0
Bromomethane	Ave	0.3951	0.3731		1.00	0.0100	-5.6	50.0
Chloroethane	Ave	0.3438	0.3379		1.00	0.0100	-1.7	50.0
Trichlorofluoromethane	Ave	0.5693	0.5012		1.00	0.0100	-12.0	50.0
Acrolein	Qua		0.0264		20.0	0.100	-33.1	50.0
1,1-Dichloroethene	Ave	0.3445	0.3621		1.00	0.0100	5.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2631	0.2727		1.00	0.0100	3.7	50.0
Acetone	Qua		0.0715		10.0	0.0200	-5.0	50.0
Iodomethane	Ave	0.4958	0.5247		1.00	0.0100	5.8	50.0
Carbon disulfide	Ave	0.7463	0.9252		1.00	0.0100	24.0	50.0
Acetonitrile	Ave	0.0282	0.0292		20.0	0.100	3.6	50.0
Methyl acetate	Ave	0.1586	0.1457		10.0	0.0200	-8.1	50.0
Methylene Chloride	Lin1		0.3743		1.00	0.0100	-3.2	50.0
tert-Butyl alcohol	Ave	0.0097	0.0094		50.0	0.200	-2.6	50.0
Acrylonitrile	Ave	0.0871	0.0883		20.0	0.0200	1.3	50.0
trans-1,2-Dichloroethene	Ave	0.3568	0.3390		1.00	0.0100	-5.0	50.0
Methyl tert-butyl ether	Ave	0.6313	0.5864		1.00	0.0100	-7.1	50.0
Hexane	Ave	0.0668	0.0627		1.00	0.0100	-6.2	20.0
1,1-Dichloroethane	Ave	0.5749	0.5408	0.1000	1.00	0.0100	-5.9	50.0
Vinyl acetate	Ave	0.0383	0.0380		2.00	0.0100	-0.6	50.0
2,2-Dichloropropane	Ave	0.2770	0.2491		1.00	0.0100	-10.1	50.0
cis-1,2-Dichloroethene	Ave	0.3769	0.3582		1.00	0.0100	-5.0	50.0
2-Butanone	Ave	0.0910	0.0896		10.0	0.0200	-1.5	50.0
Bromochloromethane	Ave	0.1662	0.1532		1.00	0.0100	-7.8	50.0
Tetrahydrofuran	Lin1		0.0424		5.00	0.0100	-16.0	50.0
Chloroform	Ave	0.5671	0.5193		1.00	0.0100	-8.4	20.0
1,1,1-Trichloroethane	Ave	0.4120	0.4012		1.00	0.0100	-2.6	50.0
Cyclohexane	Ave	0.5423	0.5200		1.00	0.0100	-4.1	50.0
1,1-Dichloropropene	Ave	0.4381	0.3974		1.00	0.0100	-9.3	50.0
Carbon tetrachloride	Ave	0.3243	0.3027		1.00	0.0100	-6.7	50.0
Benzene	Ave	1.387	1.242		1.00	0.0100	-10.5	50.0
1,2-Dichloroethane	Ave	0.4040	0.3272		1.00	0.0100	-19.0	50.0
Trichloroethene	Ave	0.3397	0.3064		1.00	0.0100	-9.8	50.0
Methylcyclohexane	Ave	0.5006	0.4957		1.00	0.0100	-1.0	50.0
1,2-Dichloropropane	Ave	0.3010	0.2643		1.00	0.0100	-12.2	20.0
Dibromomethane	Ave	0.1618	0.1478		1.00	0.0100	-8.6	50.0
1,4-Dioxane	Lin1		0.0019		50.0	0.500	-27.0	50.0
Bromodichloromethane	Ave	0.3013	0.2786		1.00	0.0100	-7.5	50.0

NC

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVIS 240-83937/2 Calibration Date: 04/29/2013 12:03

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC1134.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1193	0.1102		10.0	0.0200	-7.6	50.0
cis-1,3-Dichloropropene	Lin1		0.2746		1.00	0.0100	-22.9	50.0
4-Methyl-2-pentanone	Ave	0.1532	0.1718		10.0	0.0200	12.1	50.0
Toluene	Ave	2.028	1.866		1.00	0.0100	-8.0	20.0
trans-1,3-Dichloropropene	Lin1		0.3069		1.00	0.0100	-24.6	50.0
Ethyl methacrylate	Lin1		0.3480		1.00	0.0100	-8.3	50.0
1,1,2-Trichloroethane	Ave	0.3232	0.2777		1.00	0.0100	-14.1	50.0
Tetrachloroethene	Ave	0.3905	0.3620		1.00	0.0100	-7.3	50.0
1,3-Dichloropropane	Ave	0.5899	0.5253		1.00	0.0100	-10.9	50.0
2-Hexanone	Ave	0.1436	0.1655		10.0	0.0200	15.2	50.0
Dibromochloromethane	Lin1		0.2675		1.00	0.0100	-13.7	50.0
1,2-Dibromoethane	Ave	0.3048	0.2854		1.00	0.0100	-6.4	50.0
Chlorobenzene	Ave	1.276	1.157	0.3000	1.00	0.0100	-9.3	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3534	0.3674		1.00	0.0100	3.9	50.0
Ethylbenzene	Ave	0.6700	0.6252		1.00	0.0100	-6.7	20.0
m-Xylene & p-Xylene	Ave	1.626	1.588		2.00	0.0200	-2.3	50.0
o-Xylene	Ave	0.8173	0.8080		1.00	0.0100	-1.1	50.0
Styrene	Lin1		1.243		1.00	0.0100	-14.0	50.0
Bromoform	Lin1		0.1402	0.1000	1.00	0.0100	-10.3	50.0
Isopropylbenzene	Ave	1.984	1.987		1.00	0.0100	0.1	50.0
Bromobenzene	Ave	0.9263	0.7701		1.00	0.0100	-16.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6910	0.6053	0.3000	1.00	0.0100	-12.4	50.0
1,2,3-Trichloropropane	Ave	0.2206	0.1754		1.00	0.0100	-20.5	50.0
trans-1,4-Dichloro-2-butene	Qua		0.0408		1.00	0.0100	-38.1	50.0
n-Propylbenzene	Ave	0.9249	0.8381		1.00	0.0100	-9.4	50.0
2-Chlorotoluene	Ave	0.8847	0.7709		1.00	0.0100	-12.9	50.0
1,3,5-Trimethylbenzene	Ave	2.730	2.571		1.00	0.0100	-5.8	50.0
4-Chlorotoluene	Ave	2.918	2.487		1.00	0.0100	-14.8	50.0
tert-Butylbenzene	Ave	2.268	2.146		1.00	0.0100	-5.4	50.0
1,2,4-Trimethylbenzene	Ave	2.853	2.615		1.00	0.0100	-8.3	50.0
sec-Butylbenzene	Ave	3.298	3.137		1.00	0.0100	-4.9	50.0
1,3-Dichlorobenzene	Ave	1.741	1.533		1.00	0.0100	-11.9	50.0
p-Isopropyltoluene	Ave	2.821	2.669		1.00	0.0100	-5.4	50.0
1,4-Dichlorobenzene	Ave	1.894	1.620		1.00	0.0100	-14.5	50.0
1,2-Dichlorobenzene	Ave	1.674	1.510		1.00	0.0100	-9.8	50.0
n-Butylbenzene	Ave	2.489	2.291		1.00	0.0100	-7.9	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0685	0.0665		2.00	0.0100	-2.9	50.0
1,3,5-Trichlorobenzene	Ave	1.071	0.9847		1.00	0.0100	-8.0	50.0
1,2,4-Trichlorobenzene	Ave	0.7546	0.6595		1.00	0.0100	-12.6	50.0
Hexachlorobutadiene	Ave	0.5612	0.4486		1.00	0.0100	-20.1	50.0
Naphthalene	Lin1		1.188		1.00	0.0100	-22.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVIS 240-83937/2 Calibration Date: 04/29/2013 12:03

Instrument ID: A3UX15 Calib Start Date: 04/04/2013 12:03

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/04/2013 13:56

Lab File ID: UXC1134.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6565	0.5536		1.00	0.0100	-15.7	50.0
Dibromofluoromethane (Surr)	Ave	0.2913	0.2903		0.00887	0.00890	-0.4	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3128	0.2893		0.00823	0.00890	-7.5	50.0
Toluene-d8 (Surr)	Ave	1.667	1.689		0.00902	0.00890	1.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5188	0.5186		0.00890	0.00890	-0.0	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab File ID: UXC1137.D Lab Sample ID: MB 240-83937/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 04/29/2013 13:10

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-83937/4	UXC1135.D	04/29/2013 12:25
TB-042313	240-23592-1	UXC1152.D	04/29/2013 18:53
MRC-MW90B-042313	240-23592-2	UXC1153.D	04/29/2013 19:15
MRC-MW-58A-042313	240-23592-5	UXC1154.D	04/29/2013 19:37
MRC-MW-22B-042313	240-23592-7	UXC1155.D	04/29/2013 20:00
MRC-MW-57A-042313	240-23592-8	UXC1156.D	04/29/2013 20:22
	400-74253-A-5 MS	UXC1158.D	04/29/2013 21:06
	400-74253-A-5 MSD	UXC1159.D	04/29/2013 21:29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-83937/5

Matrix: Water | Lab File ID: UXC1137.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 83937 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83937/5

Matrix: Water Lab File ID: UXC1137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83937/5

Matrix: Water Lab File ID: UXC1137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-83937/5

Matrix: Water Lab File ID: UXC1137.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2013 13:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 83937 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1135.D

Lab ID: LCS 240-83937/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.92	99	83-112	
Bromobenzene	10.0	9.13	91	76-115	
Bromochloromethane	10.0	9.85	99	77-120	
Bromodichloromethane	10.0	10.7	107	72-121	
Bromoform	10.0	9.02	90	40-131	
Bromomethane	10.0	7.63	76	11-185	
2-Butanone	20.0	17.9	90	60-126	
Carbon disulfide	10.0	13.8	138	62-142	
Carbon tetrachloride	10.0	9.91	99	66-128	
Chlorobenzene	10.0	9.73	97	85-110	
Chloroethane	10.0	8.60	86	25-153	
2-Chloroethyl vinyl ether	10.0	9.14 J	91	52-131	
Chloroform	10.0	10.2	102	79-117	
Chloromethane	10.0	7.76	78	44-126	
2-Chlorotoluene	10.0	9.55	96	76-116	
4-Chlorotoluene	10.0	9.43	94	77-115	
cis-1,2-Dichloroethene	10.0	10.0	100	80-113	
cis-1,3-Dichloropropene	10.0	8.74	87	61-115	
Dibromochloromethane	10.0	9.08	91	64-119	
1,2-Dibromo-3-Chloropropane	10.0	11.3	113	42-136	
1,2-Dibromoethane	10.0	9.20	92	79-113	
Dibromomethane	10.0	10.1	101	81-120	
1,2-Dichlorobenzene	10.0	9.59	96	81-110	
1,3-Dichlorobenzene	10.0	9.67	97	80-110	
1,4-Dichlorobenzene	10.0	9.23	92	82-110	
Dichlorodifluoromethane	10.0	5.54	55	19-129	
1,1-Dichloroethane	10.0	10.1	101	82-115	
1,2-Dichloroethane	10.0	9.15	92	71-127	
1,1-Dichloroethene	10.0	11.7	117	78-131	
1,2-Dichloropropane	10.0	9.67	97	81-115	
1,3-Dichloropropane	10.0	9.77	98	79-116	
2,2-Dichloropropane	10.0	9.04	90	50-129	
1,1-Dichloropropene	10.0	9.98	100	83-114	
Diisopropyl ether	10.0	9.43	94	77-118	
Ethylbenzene	10.0	10.2	102	83-112	
Hexachlorobutadiene	10.0	8.25	83	36-134	
2-Hexanone	20.0	20.1	100	55-133	
Isopropylbenzene	10.0	10.4	104	75-114	
Methylene Chloride	10.0	10.9	109	66-131	
4-Methyl-2-pentanone	20.0	20.6	103	63-128	
Methyl tert-butyl ether	10.0	9.98	100	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1135.D

Lab ID: LCS 240-83937/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.2	101	83-113	
Naphthalene	10.0	8.41	84	32-141	
n-Butylbenzene	10.0	10.2	102	66-125	
n-Propylbenzene	10.0	10.2	102	74-121	
o-Xylene	10.0	10.5	105	83-113	
p-Isopropyltoluene	10.0	10.4	104	74-120	
sec-Butylbenzene	10.0	10.0	100	70-117	
Styrene	10.0	9.51	95	79-114	
tert-Butyl alcohol	200	224	112	70-130	
tert-Butylbenzene	10.0	10.1	101	71-115	
1,1,1,2-Tetrachloroethane	10.0	10.7	107	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.28	93	68-118	
Tetrachloroethene	10.0	9.33	93	79-114	
Toluene	10.0	9.95	100	84-111	
trans-1,2-Dichloroethene	10.0	10.4	104	83-117	
trans-1,3-Dichloropropene	10.0	8.57	86	58-117	
1,2,3-Trichlorobenzene	10.0	9.37	94	54-126	
1,2,4-Trichlorobenzene	10.0	8.74	87	48-135	
1,1,1-Trichloroethane	10.0	9.54	95	74-118	
Trichloroethene	10.0	9.80	98	76-117	
Trichlorofluoromethane	10.0	8.06	81	49-157	
1,2,3-Trichloropropane	10.0	8.56	86	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.0	120	74-151	
1,2,3-Trimethylbenzene	10.0	9.89	99	70-130	
1,2,4-Trimethylbenzene	10.0	10.0	100	76-120	
Vinyl acetate	10.0	7.47	75	46-161	
Vinyl chloride	10.0	8.32	83	53-127	
Xylenes, Total	30.0	30.7	102	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1158.D

Lab ID: 400-74253-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	133	33 U	126	94	33-145	
Benzene	66.7	10	79.3	103	72-121	
Bromobenzene	66.7	6.7 U	51.5	77	71-116	
Bromochloromethane	66.7	6.7 U	68.1	102	73-121	
Bromodichloromethane	66.7	6.7 U	65.3	98	67-120	
Bromoform	66.7	6.7 U	55.5	83	32-128	
Bromomethane	66.7	6.7 U	57.7	86	10-186	
2-Butanone	133	33 U	110	82	54-129	
Carbon disulfide	66.7	6.7 U	95.3	143	57-147	
Carbon tetrachloride	66.7	6.7 U	63.2	95	59-129	
Chlorobenzene	66.7	6.7 U	64.3	96	80-110	
Chloroethane	66.7	6.7 U	67.4	101	21-165	
2-Chloroethyl vinyl ether	66.7	67 U	67 U	0	10-150	F
Chloroform	66.7	6.7 U	67.5	101	76-118	
Chloromethane	66.7	6.7 U	56.2	84	33-132	
2-Chlorotoluene	66.7	6.7 U	57.1	86	69-117	
4-Chlorotoluene	66.7	6.7 U	60.6	91	71-116	
cis-1,2-Dichloroethene	66.7	6.7 U	68.8	103	70-120	
cis-1,3-Dichloropropene	66.7	6.7 U	46.9	70	51-110	
Dibromochloromethane	66.7	6.7 U	54.5	82	56-118	
1,2-Dibromo-3-Chloropropane	66.7	33 U	63.1	95	32-139	
1,2-Dibromoethane	66.7	6.7 U	60.9	91	74-113	
Dibromomethane	66.7	6.7 U	66.5	100	77-121	
1,2-Dichlorobenzene	66.7	6.7 U	63.0	94	75-111	
1,3-Dichlorobenzene	66.7	6.7 U	57.2	86	73-110	
1,4-Dichlorobenzene	66.7	6.7 U	54.9	82	75-110	
Dichlorodifluoromethane	66.7	6.7 U	33.1	50	17-128	
1,1-Dichloroethane	66.7	6.7 U	69.3	104	79-116	
1,2-Dichloroethane	66.7	6.7 U	62.4	93	68-129	
1,1-Dichloroethene	66.7	6.7 U	77.1	116	74-135	
1,2-Dichloropropane	66.7	6.7 U	66.1	99	78-115	
1,3-Dichloropropane	66.7	6.7 U	62.0	93	74-118	
2,2-Dichloropropane	66.7	6.7 U	54.4	82	38-127	
1,1-Dichloropropene	66.7	6.7 U	63.7	96	80-114	
Diisopropyl ether	66.7	33 U	64.3	96	73-118	
Ethylbenzene	66.7	200	294	137	75-116	E F
Hexachlorobutadiene	66.7	6.7 U	48.2	72	27-132	
2-Hexanone	133	33 U	137	103	47-139	
Isopropylbenzene	66.7	36	123	130	68-116	F
Methylene Chloride	66.7	6.7 U	73.5	110	63-128	
4-Methyl-2-pentanone	133	33 U	135	101	56-131	
Methyl tert-butyl ether	66.7	6.7 U	65.5	98	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1158.D

Lab ID: 400-74253-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	133	400	526	94	75-117	
Naphthalene	66.7	82	136	80	15-158	E
n-Butylbenzene	66.7	8.5	74.9	100	56-127	
n-Propylbenzene	66.7	100	150	72	64-124	
o-Xylene	66.7	14	95.8	123	76-116	F
p-Isopropyltoluene	66.7	2.0 J	63.3	92	64-122	
sec-Butylbenzene	66.7	4.3 J	64.4	90	60-119	
Styrene	66.7	6.7 U	67.1	101	71-117	
tert-Butyl alcohol	1330	130 U	1300	97	70-130	
tert-Butylbenzene	66.7	6.7 U	60.5	91	61-119	
1,1,1,2-Tetrachloroethane	66.7	6.7 U	70.1	105	64-118	
1,1,2,2-Tetrachloroethane	66.7	6.7 U	53.0	79	63-122	
Tetrachloroethene	66.7	6.7 U	62.6	94	70-117	
Toluene	66.7	6.7 U	66.7	100	78-114	
trans-1,2-Dichloroethene	66.7	6.7 U	69.0	103	80-119	
trans-1,3-Dichloropropene	66.7	6.7 U	49.2	74	46-116	
1,2,3-Trichlorobenzene	66.7	6.7 U	58.0	87	45-129	
1,2,4-Trichlorobenzene	66.7	6.7 U	62.1	93	38-138	
1,1,1-Trichloroethane	66.7	6.7 U	63.6	95	68-121	
Trichloroethene	66.7	6.7 U	64.2	96	66-120	
Trichlorofluoromethane	66.7	6.7 U	48.4	73	46-157	
1,2,3-Trichloropropane	66.7	6.7 U	49.6	74	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	66.7	6.7 U	75.9	114	70-152	
1,2,3-Trimethylbenzene	66.7	67	130	95	70-130	
1,2,4-Trimethylbenzene	66.7	190	236	74	67-124	
Vinyl acetate	66.7	13 U	53.1	80	43-157	
Vinyl chloride	66.7	6.7 U	59.9	90	49-130	
Xylenes, Total	200	410	622	104	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1159.D

Lab ID: 400-74253-A-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	133	114	85	10	30	33-145	
Benzene	66.7	77.8	101	2	30	72-121	
Bromobenzene	66.7	53.4	80	4	30	71-116	
Bromochloromethane	66.7	63.9	96	6	30	73-121	
Bromodichloromethane	66.7	66.1	99	1	30	67-120	
Bromoform	66.7	57.9	87	4	30	32-128	
Bromomethane	66.7	56.6	85	2	30	10-186	
2-Butanone	133	115	86	5	30	54-129	
Carbon disulfide	66.7	90.5	136	5	30	57-147	
Carbon tetrachloride	66.7	60.6	91	4	30	59-129	
Chlorobenzene	66.7	62.0	93	4	30	80-110	
Chloroethane	66.7	66.3	99	2	30	21-165	
2-Chloroethyl vinyl ether	66.7	67 U	0	NC	30	10-150	F
Chloroform	66.7	65.4	98	3	30	76-118	
Chloromethane	66.7	52.3	78	7	30	33-132	
2-Chlorotoluene	66.7	59.8	90	5	30	69-117	
4-Chlorotoluene	66.7	61.4	92	1	30	71-116	
cis-1,2-Dichloroethene	66.7	66.3	99	4	30	70-120	
cis-1,3-Dichloropropene	66.7	50.2	75	7	30	51-110	
Dibromochloromethane	66.7	53.0	79	3	30	56-118	
1,2-Dibromo-3-Chloropropane	66.7	66.4	100	5	30	32-139	
1,2-Dibromoethane	66.7	61.8	93	1	30	74-113	
Dibromomethane	66.7	66.1	99	1	30	77-121	
1,2-Dichlorobenzene	66.7	63.8	96	1	30	75-111	
1,3-Dichlorobenzene	66.7	58.8	88	3	30	73-110	
1,4-Dichlorobenzene	66.7	56.2	84	2	30	75-110	
Dichlorodifluoromethane	66.7	33.5	50	1	30	17-128	
1,1-Dichloroethane	66.7	68.5	103	1	30	79-116	
1,2-Dichloroethane	66.7	60.4	91	3	30	68-129	
1,1-Dichloroethene	66.7	70.3	105	9	30	74-135	
1,2-Dichloropropane	66.7	65.7	98	1	30	78-115	
1,3-Dichloropropane	66.7	60.5	91	2	30	74-118	
2,2-Dichloropropane	66.7	54.8	82	1	30	38-127	
1,1-Dichloropropene	66.7	61.3	92	4	30	80-114	
Diisopropyl ether	66.7	64.2	96	0	30	73-118	
Ethylbenzene	66.7	284	122	3	30	75-116	E F
Hexachlorobutadiene	66.7	47.3	71	2	30	27-132	
2-Hexanone	133	142	107	4	30	47-139	
Isopropylbenzene	66.7	118	123	3	30	68-116	F
Methylene Chloride	66.7	69.0	104	6	30	63-128	
4-Methyl-2-pentanone	133	130	97	4	30	56-131	
Methyl tert-butyl ether	66.7	65.6	98	0	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC1159.D

Lab ID: 400-74253-A-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	133	504	78	4	30	75-117	
Naphthalene	66.7	140	87	3	30	15-158	E
n-Butylbenzene	66.7	74.6	99	0	30	56-127	
n-Propylbenzene	66.7	152	75	1	30	64-124	
o-Xylene	66.7	91.6	117	5	30	76-116	F
p-Isopropyltoluene	66.7	64.9	94	2	30	64-122	
sec-Butylbenzene	66.7	64.6	90	0	30	60-119	
Styrene	66.7	64.7	97	4	30	71-117	
tert-Butyl alcohol	1330	1310	98	1	30	70-130	
tert-Butylbenzene	66.7	60.7	91	0	30	61-119	
1,1,1,2-Tetrachloroethane	66.7	69.0	104	2	30	64-118	
1,1,2,2-Tetrachloroethane	66.7	55.9	84	5	30	63-122	
Tetrachloroethene	66.7	60.0	90	4	30	70-117	
Toluene	66.7	65.8	99	1	30	78-114	
trans-1,2-Dichloroethene	66.7	68.7	103	0	30	80-119	
trans-1,3-Dichloropropene	66.7	50.2	75	2	30	46-116	
1,2,3-Trichlorobenzene	66.7	61.5	92	6	30	45-129	
1,2,4-Trichlorobenzene	66.7	64.4	97	4	30	38-138	
1,1,1-Trichloroethane	66.7	63.8	96	0	30	68-121	
Trichloroethene	66.7	62.1	93	3	30	66-120	
Trichlorofluoromethane	66.7	47.9	72	1	30	46-157	
1,2,3-Trichloropropane	66.7	54.6	82	10	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	66.7	67.6	101	12	30	70-152	
1,2,3-Trimethylbenzene	66.7	130	96	1	30	70-130	
1,2,4-Trimethylbenzene	66.7	241	81	2	30	67-124	
Vinyl acetate	66.7	52.4	79	1	30	43-157	
Vinyl chloride	66.7	56.0	84	7	30	49-130	
Xylenes, Total	200	596	91	4	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Sample No.: STD8260 240-80603/4 Date Analyzed: 04/04/2013 12:49

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC0375.D Heated Purge: (Y/N) N

Calibration ID: 14376

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1729460	4.66	1133021	7.30	677293	9.51
UPPER LIMIT		3458920	5.16	2266042	7.80	1354586	10.01
LOWER LIMIT		864730	4.16	566511	6.80	338647	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-80603/14		1334789	4.66	893340	7.30	586559	9.51
CCVIS 240-83937/2		2005027	4.66	1277367	7.30	809279	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII

GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Sample No.: CCVIS 240-83937/2 Date Analyzed: 04/29/2013 12:03

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC1134.D Heated Purge: (Y/N) N

Calibration ID: 14378

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2005027	4.66	1277367	7.30	809279	9.51
UPPER LIMIT		4010054	5.16	2554734	7.80	1618558	10.01
LOWER LIMIT		1002514	4.16	638684	6.80	404640	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-83937/3		2147683	4.66	1380160	7.30	664934	9.51
LCS 240-83937/4		2024199	4.66	1375675	7.30	849905	9.51
MB 240-83937/5		2014551	4.66	1383425	7.30	644007	9.51
240-23592-1	TB-042313	1682435	4.66	1153809	7.30	564232	9.51
240-23592-2	MRC-MW90B-042313	1585273	4.66	1132334	7.30	556435	9.51
240-23592-5	MRC-MW-58A-042313	1656146	4.66	1148892	7.30	538071	9.51
240-23592-7	MRC-MW-22B-042313	1707248	4.66	1234307	7.30	546422	9.51
240-23592-8	MRC-MW-57A-042313	1771327	4.66	1232382	7.30	557272	9.51
400-74253-A-5 MS		1742255	4.66	1133920	7.30	859011	9.51
400-74253-A-5 MSD		1906923	4.66	1244391	7.30	884599	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

SDG 240-23592

SAMPLE ID MRC-MW90B-042313

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST / IS AMOUNT (NG)	Final Volume (ML)	AVE RRF	CONCENTRATION ug/L
1585273	2	1923769 / 10	5	0.3397	71.45
			Sample Volume (ML)		
			5		

Trichloroethene = 71 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX15\20130429-19357.b\UXC1153.D		
Lims ID:	240-23592-B-2	Client ID:	MRC-MW90B-042313
Inject. Date:	29-Apr-2013 19:15:30	Dil. Factor:	2.0000
Sample Type:	Client		
Sample ID:	240-0019357-021		
Misc. Info.:	C30429A,8260LLUX15,,43582		
Operator:	43582	Instrument ID:	A3UX15
Purge Vol:	5.000 mL	ALS Bottle#:	25
Lims Batch ID:	83937	Lims Sample ID:	21
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX15\20130429-19357.b\8260_15.m		
Last Update:	30-Apr-2013 08:01:14	Calib Date:	04-Apr-2013 16:10:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX15\20130404-18552.b\UXC0384.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK005		
First Level Reviewer: evansle		Date:	30-Apr-2013 07:53:10

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	4.656	4.656	0.0	100	1585273	10.0	
* 2 Chlorobenzene-d5	117	7.301	7.301	0.0	85	1132334	10.0	
* 3 1,4-Dichlorobenzene-d4	152	9.506	9.506	0.0	92	556435	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.111	4.099	0.012	64	397470	8.61	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.384	4.383	0.001	0	452694	9.13	
$ 7 Toluene-d8 (Surr)	98	6.008	6.008	0.0	93	1463948	7.76	
$ 131 4-Bromofluorobenzene (Surr)	95	8.404	8.392	0.012	96	465125	7.92	
12 Dichlorodifluoromethane	85		1.158					9
13 Chloromethane	50	1.265	1.265	0.0	75	13327	0.1638	
14 Vinyl chloride	62		1.348					9
15 Bromomethane	94		1.585					
16 Chloroethane	64		1.656					
18 Trichlorofluoromethane	101		1.858					
21 1,1-Dichloroethene	96	2.261	2.261	0.0	97	262373	4.80	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.273					9
22 Acetone	43	2.308	2.308	0.0	80	32736	1.75	
26 Carbon disulfide	76	2.439	2.427	0.012	76	25088	0.2120	
30 Methylene Chloride	84		2.652					
31 2-Methyl-2-propanol	59		2.771					9
33 trans-1,2-Dichloroethene	96		2.877					9
34 Methyl tert-butyl ether	73		2.889					9
36 1,1-Dichloroethane	63		3.233					9
37 Vinyl acetate	86		3.281					
38 Isopropyl ether	87		3.292					
40 Tert-butyl ethyl ether	59		3.589					9
42 cis-1,2-Dichloroethene	96	3.708	3.707	0.001	79	97746	1.64	
43 2,2-Dichloropropane	77		3.707					9
41 2-Butanone (MEK)	43		3.731					
47 Chlorobromomethane	128		3.909					9
49 Chloroform	83	3.980	3.968	0.012	77	25602	0.2848	

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
50 1,1,1-Trichloroethane	97		4.123					
53 Carbon tetrachloride	117		4.253					9
52 1,1-Dichloropropene	75		4.253					
55 Benzene	78		4.431					9
56 1,2-Dichloroethane	62		4.443					
57 Tert-amyl methyl ether	73		4.526					9
60 Trichloroethene	130	4.965	4.964	0.001	98	1923769	35.7	
62 1,2-Dichloropropane	63		5.154					9
65 Dibromomethane	93		5.249					9
67 Dichlorobromomethane	83		5.391					9
69 2-Chloroethyl vinyl ether	63		5.652					9
70 cis-1,3-Dichloropropene	75		5.783					9
71 4-Methyl-2-pentanone (MIBK)	43		5.925					9
72 Toluene	91		6.067					
73 trans-1,3-Dichloropropene	75		6.269					9
77 Tetrachloroethene	164		6.554					9
76 1,3-Dichloropropane	76		6.577					9
78 2-Hexanone	43		6.660					9
79 Chlorodibromomethane	129		6.779					9
123 Ethylene Dibromide	107		6.874					
82 Chlorobenzene	112		7.324					9
83 1,1,1,2-Tetrachloroethane	131		7.407					
84 Ethylbenzene	106		7.431					9
10 m-Xylene & p-Xylene	91		7.538					9
85 o-Xylene	106		7.905					9
86 Styrene	104		7.917					
87 Bromoform	173		8.095					9
88 Isopropylbenzene	105		8.261					9
91 Bromobenzene	156		8.534					
90 1,1,2,2-Tetrachloroethane	83		8.546					
92 1,2,3-Trichloropropane	110		8.581					9
94 N-Propylbenzene	120		8.652					9
95 2-Chlorotoluene	126		8.724					9
104 4-Chlorotoluene	91		8.830					9
97 tert-Butylbenzene	119		9.127					9
98 1,2,4-Trimethylbenzene	105		9.174					9
99 sec-Butylbenzene	105		9.340					
100 1,3-Dichlorobenzene	146		9.435					
101 4-Isopropyltoluene	119		9.483					9
102 1,4-Dichlorobenzene	146		9.530					9
103 1,2,3-Trimethylbenzene	105		9.577					9
106 1,2-Dichlorobenzene	146		9.886					
105 n-Butylbenzene	91		9.886					9
107 1,2-Dibromo-3-Chloropropane	157		10.645					
109 1,2,4-Trichlorobenzene	180		11.463					
110 Hexachlorobutadiene	225		11.641					
111 Naphthalene	128		11.700					9
112 1,2,3-Trichlorobenzene	180		11.937					
S 114 Xylenes, Total	106		16.530					

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW90B-042313	240-23592-2	65	66	65	61	70	54
MRC-MW91A-042313	240-23592-3	73	71	71	64	68	57
MRC-MW-58A-042313	240-23592-5	66	66	64	60	63	55
MRC-MW-22B-042313	240-23592-7	62	61	58	54	60	54
	MB 240-83555/12-A	82	81	78	71	65	65
	LCS 240-83555/13-A	81	79	78	69	71	58

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/11/2013 17:39

Analysis Batch Number: 81611 End Date: 04/12/2013 00:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-81611/1		04/11/2013 17:39	1	30411001.D	DB-624 0.18(mm)
STD5 240-81611/2 IC		04/11/2013 18:04	1	30411002.D	DB-624 0.18(mm)
STD4 240-81611/3 IC		04/11/2013 18:28	1	30411003.D	DB-624 0.18(mm)
STD3 240-81611/4 IC		04/11/2013 18:53	1	30411004.D	DB-624 0.18(mm)
STD2 240-81611/5 IC		04/11/2013 19:17	1	30411005.D	DB-624 0.18(mm)
STD1 240-81611/6 IC		04/11/2013 19:41	1	30411006.D	DB-624 0.18(mm)
STD9 240-81611/7 IC		04/11/2013 20:06	1	30411007.D	DB-624 0.18(mm)
STD8 240-81611/8 IC		04/11/2013 20:30	1	30411008.D	DB-624 0.18(mm)
STD7 240-81611/9 IC		04/11/2013 20:54	1	30411009.D	DB-624 0.18(mm)
STD6 240-81611/10 ICIS		04/11/2013 21:19	1	30411010.D	DB-624 0.18(mm)
ICV 240-81611/11		04/11/2013 21:43	1	30411011.D	DB-624 0.18(mm)
STD5 240-81611/12 IC		04/11/2013 22:08	1		DB-624 0.18(mm)
STD4 240-81611/13 IC		04/11/2013 22:32	1		DB-624 0.18(mm)
STD3 240-81611/14 IC		04/11/2013 22:56	1		DB-624 0.18(mm)
STD2 240-81611/15 IC		04/11/2013 23:21	1		DB-624 0.18(mm)
STD6 240-81611/16 IC		04/11/2013 23:45	1		DB-624 0.18(mm)
STD7 240-81611/17 IC		04/12/2013 00:09	1		DB-624 0.18(mm)
STD8 240-81611/18 IC		04/12/2013 00:34	1		DB-624 0.18(mm)
STD9 240-81611/19 IC		04/12/2013 00:58	1		DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab File ID: 30411001.D DFTPP Injection Date: 04/11/2013

Instrument ID: A4HP10 DFTPP Injection Time: 17:39

Analysis Batch No.: 81611

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	44.0	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	48.3	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.2	
441	Present, but less than mass 443	10.1	
442	40.0 - 110.0% of mass 198	49.1	
443	15.0 - 24.0% of mass 442	10.2	(20.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-81611/2	30411002.D	04/11/2013	18:04
	STD4 240-81611/3	30411003.D	04/11/2013	18:28
	STD3 240-81611/4	30411004.D	04/11/2013	18:53
	STD2 240-81611/5	30411005.D	04/11/2013	19:17
	STD1 240-81611/6	30411006.D	04/11/2013	19:41
	STD9 240-81611/7	30411007.D	04/11/2013	20:06
	STD8 240-81611/8	30411008.D	04/11/2013	20:30
	STD7 240-81611/9	30411009.D	04/11/2013	20:54
	STD6 240-81611/10	30411010.D	04/11/2013	21:19
	ICV 240-81611/11	30411011.D	04/11/2013	21:43

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81611/6	30411006.D
Level 2	STD2 240-81611/5	30411005.D
Level 3	STD3 240-81611/4	30411004.D
Level 4	STD4 240-81611/3	30411003.D
Level 5	STD5 240-81611/2	30411002.D
Level 6	STD6 240-81611/10	30411010.D
Level 7	STD7 240-81611/9	30411009.D
Level 8	STD8 240-81611/8	30411008.D
Level 9	STD9 240-81611/7	30411007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5077	0.8345 0.5355	0.6096 0.5712	0.5723 0.5485	0.5484	Ave		0.5910				17.0		20.0			
N-Nitrosodimethylamine	0.6705	0.6142 0.7240	0.5757 0.7721	0.5872 0.7488	0.6419	Ave		0.6668				11.0		20.0			
Pyridine	1.2317	1.1026 1.2779	1.1852 1.4178	1.1447 1.3639	1.1702	Ave		1.2367				8.9		20.0			
Benzaldehyde	1.1249 1.0449	1.0583 1.0812	1.0682 1.1599	1.0922 1.0807	1.0839	Ave		1.0882			0.0100	3.2		20.0			
Phenol	1.4667	1.5399 1.5218	1.4167 1.6495	1.4394 1.6083	1.4943	Ave		1.5171			0.8000	5.3		20.0			
Aniline	1.8148	1.7784 1.9149	1.7438 2.0710	1.7565 2.0147	1.8540	Ave		1.8685				6.5		20.0			
Bis(2-chloroethyl)ether	1.1033	1.2234 1.1759	1.1542 1.2689	1.1207 1.2266	1.1205	Ave		1.1742			0.7000	5.1		20.0			
2-Chlorophenol	1.1629	1.2275 1.2455	1.1526 1.3481	1.1518 1.2918	1.2072	Ave		1.2234			0.8000	5.8		20.0			
1,3-Dichlorobenzene	1.2781	1.2588 1.3219	1.2627 1.4607	1.2751 1.3977	1.3248	Ave		1.3225				5.5		20.0			
1,4-Dichlorobenzene	1.3065	1.3310 1.3551	1.3000 1.4638	1.2381 1.4277	1.3723	Ave		1.3493				5.4		20.0			
Benzyl alcohol	0.7618	0.7103 0.7799	0.7415 0.8771	0.7511 0.8324	0.7602	Ave		0.7768				6.9		20.0			
1,2-Dichlorobenzene	1.2420	1.2455 1.2772	1.3006 1.3837	1.2478 1.3461	1.2559	Ave		1.2873				4.1		20.0			
2-Methylphenol	1.0801	1.0155 1.1189	1.0441 1.2414	1.0430 1.1821	1.1117	Ave		1.1046			0.7000	6.9		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
bis (2-chloroisopropyl) ether	1.7762	1.7526 1.7827	1.7706 1.9261	1.7716 1.8305	1.7485	Ave		1.7948				3.3		20.0			
Indene	2.1892	2.2101 2.3103	2.1177 2.5233	2.2032 2.4546	2.2191	Ave		2.2784				6.2		20.0			
3 & 4 Methylphenol	1.1463	0.9811 1.2044	1.0504 1.3031	1.1118 1.2655	1.1459	Ave		1.1511				9.3		20.0			
N-Nitrosodi-n-propylamine	0.8163	0.7284 0.8309	0.8275 0.9342	0.7561 0.8767	0.8224	Ave		0.8241			0.5000	7.8		20.0			
Acetophenone	1.6837	1.6774 1.7441	1.6239 1.9230	1.5986 1.8236	1.6542	Ave		1.7161			0.0100	6.4		20.0			
Hexachloroethane	0.5024	0.4873 0.5185	0.5391 0.5799	0.4851 0.5583	0.5013	Ave		0.5215			0.3000	6.6		20.0			
Nitrobenzene	0.3393	0.2935 0.3397	0.3186 0.3686	0.3503 0.3739	0.3367	Ave		0.3401			0.2000	7.6		20.0			
Isophorone	0.6024	0.5382 0.6055	0.6003 0.6631	0.5893 0.6719	0.6114	Ave		0.6103			0.4000	6.9		20.0			
2-Nitrophenol	0.1688	0.1483 0.1670	0.1364 0.1821	0.1540 0.1824	0.1598	Ave		0.1624			0.1000	9.9		20.0			
2,4-Dimethylphenol	0.3088	0.3026 0.3127	0.2903 0.3293	0.3064 0.3322	0.3090	Ave		0.3114			0.2000	4.4		20.0			
Benzoic acid	0.1733	0.2118 0.1947	0.1207 0.2074	0.1332 0.2151	0.1529	Lin	-0.375	0.2157							0.9940		0.9900
Bis(2-chloroethoxy)methane	0.3578	0.3487 0.3609	0.3198 0.3926	0.3456 0.3911	0.3593	Ave		0.3595			0.3000	6.6		20.0			
2,4-Dichlorophenol	0.2592	0.2195 0.2599	0.2327 0.2892	0.2476 0.2809	0.2592	Ave		0.2560			0.2000	9.0		20.0			
1,2,4-Trichlorobenzene	0.2995	0.2868 0.2969	0.2893 0.3162	0.2946 0.3235	0.2918	Ave		0.2998				4.4		20.0			
Naphthalene	0.9657 0.9168	0.8889 0.9018	0.8702 0.9805	0.9202 0.9845	0.9227	Ave		0.9279			0.7000	4.4		20.0			
4-Chloroaniline	0.3866	0.3451 0.3850	0.3615 0.4233	0.3894 0.4252	0.3775	Ave		0.3867			0.0100	7.1		20.0			
Hexachlorobutadiene	0.1829	0.1673 0.1847	0.1820 0.1945	0.1819 0.1972	0.1770	Ave		0.1834			0.0100	5.1		20.0			
Caprolactam	0.0866	0.0817 0.0836	0.0907 0.0919	0.0870 0.0878	0.0924	Ave		0.0877			0.0100	4.4		20.0			
4-Chloro-3-methylphenol	0.2777	0.2476 0.2755	0.2376 0.3075	0.2633 0.3071	0.2721	Ave		0.2736			0.2000	9.1		20.0			
2-Methylnaphthalene	0.6263 0.6202	0.5993 0.6159	0.5928 0.6767	0.6071 0.6784	0.6013	Ave		0.6242			0.4000	5.1		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Methylnaphthalene	0.6328 0.5706	0.5272 0.5708	0.5726 0.6255	0.5674 0.6304	0.5711	Ave		0.5854				6.2		20.0			
Hexachlorocyclopentadiene	0.3244	0.2458 0.3297	0.2857 0.3650	0.3036 0.3694	0.3168	Ave		0.3175			0.0500	13.0		20.0			
1,2,4,5-Tetrachlorobenzene	0.5296	0.4883 0.5279	0.5034 0.5791	0.5408 0.5648	0.5136	Ave		0.5309			0.0100	5.7		20.0			
2,4,6-Trichlorophenol	0.3362	0.2737 0.3312	0.3026 0.3733	0.3317 0.3699	0.3209	Ave		0.3299			0.2000	9.9		20.0			
2,4,5-Trichlorophenol	0.3490	0.2619 0.3582	0.3071 0.3906	0.3430 0.3868	0.3408	Ave		0.3422			0.2000	12.0		20.0			
1,1'-Biphenyl	1.4183 1.2888	1.2052 1.2646	1.1996 1.3914	1.2515 1.3602	1.2601	Ave		1.2933			0.0100	6.1		20.0			
2-Chloronaphthalene	1.0870 0.9665	0.8911 0.9648	0.9411 1.0574	0.9751 1.0424	0.9318	Ave		0.9841			0.8000	6.6		20.0			
2-Nitroaniline	0.3074	0.2641 0.3142	0.2773 0.3526	0.2742 0.3386	0.2927	Ave		0.3026			0.0100	10.0		20.0			
Dimethyl phthalate	1.1172	1.0846 1.1094	1.0775 1.2348	1.0545 1.2026	1.0662	Ave		1.1183			0.0100	5.9		20.0			
1,3-Dinitrobenzene	0.1862	0.1329 0.1901	0.1536 0.2183	0.1528 0.2170	0.1706	Ave		0.1777				17.0		20.0			
2,6-Dinitrotoluene	0.2553	0.1978 0.2525	0.2167 0.2807	0.2325 0.2829	0.2360	Ave		0.2443				12.0		20.0			
Acenaphthylene	1.5800 1.5776	1.3588 1.5783	1.4670 1.7626	1.5518 1.7191	1.5090	Ave		1.5671			0.9000	7.8		20.0			
3-Nitroaniline	0.2749	0.2109 0.2839	0.2066 0.3187	0.2461 0.3064	0.2613	Ave		0.2636			0.0100	16.0		20.0			
Acenaphthene	1.2630 1.0539	1.0224 1.0466	1.0199 1.1546	1.0598 1.1462	1.0353	Ave		1.0891			0.9000	7.5		20.0			
2,4-Dinitrophenol	0.1795	+++++ 0.1894	0.0973 0.2196	0.1260 0.2193	0.1543	Lin1	-0.327	0.2151			0.0100				0.9920		0.9900
4-Nitrophenol	0.1610	0.0978 0.1574	0.1282 0.1791	0.1442 0.1740	0.1493	Ave		0.1489				18.0		20.0			
2,4-Dinitrotoluene	0.3426	0.2407 0.3489	0.2497 0.3844	0.3036 0.3783	0.3175	Ave		0.3207			0.2000	17.0		20.0			
Dibenzofuran	1.5111 1.4426	1.3728 1.4530	1.3994 1.5940	1.4588 1.5818	1.3965	Ave		1.4678			0.8000	5.4		20.0			
2,3,4,6-Tetrachlorophenol	0.3110	0.2471 0.3089	0.2793 0.3440	0.2794 0.3393	0.2821	Ave		0.2989			0.0100	11.0		20.0			
Diethyl phthalate	1.1246	1.1681 1.1197	1.1337 1.2355	1.1285 1.2237	1.1048	Ave		1.1548			0.0100	4.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chlorophenyl phenyl ether	0.6262	0.5811 0.6191	0.6284 0.6858	0.6119 0.6730	0.5997	Ave		0.6282			0.4000	5.6		20.0			
4-Nitroaniline	0.2911	0.2107 0.2803	0.2421 0.3216	0.2520 0.3191	0.2726	Ave		0.2737			0.0100	14.0		20.0			
Fluorene	1.2068 1.1834	1.0566 1.1954	1.1679 1.3225	1.1615 1.2901	1.1557	Ave		1.1933			0.9000	6.5		20.0			
4,6-Dinitro-2-methylphenol	0.1289	0.0558 0.1298	0.0789 0.1464	0.0935 0.1440	0.1187	Lin1	-0.121	0.1418			0.0100				0.9960		0.9900
N-Nitrosodiphenylamine	0.4779	0.4226 0.4816	0.4399 0.5227	0.4584 0.5126	0.4667	Ave		0.4728			0.0100	7.2		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.6336	0.5864 0.6369	0.6119 0.6928	0.6208 0.6699	0.6342	Ave		0.6357				5.2		20.0			
Azobenzene	0.6300	0.5861 0.6367	0.6148 0.6928	0.6208 0.6699	0.6342	Ave		0.6357				5.2		20.0			
4-Bromophenyl phenyl ether	0.1772	0.1512 0.1817	0.1713 0.1943	0.1799 0.1920	0.1797	Ave		0.1784			0.1000	7.5		20.0			
Hexachlorobenzene	0.1691 0.1781	0.1726 0.1763	0.1809 0.1922	0.1793 0.1925	0.1863	Ave		0.1808			0.1000	4.5		20.0			
Atrazine	0.1849	0.1560 0.1790	0.1710 0.1902	0.1834 0.1823	0.1882	Ave		0.1794			0.0100	6.2		20.0			
Pentachlorophenol	0.1241	0.0810 0.1209	0.1010 0.1378	0.1095 0.1363	0.1237	Ave		0.1168			0.0500	16.0		20.0			
Phenanthrene	1.0188 0.9071	0.8521 0.9132	0.8991 0.9840	0.9034 0.9567	0.9132	Ave		0.9275			0.7000	5.4		20.0			
Anthracene	0.8866 0.9311	0.8129 0.9350	0.8807 1.0202	0.9153 0.9938	0.9240	Ave		0.9222			0.7000	6.6		20.0			
Carbazole	0.8333	0.7825 0.8346	0.8332 0.9127	0.8519 0.9019	0.8485	Ave		0.8498			0.0100	4.9		20.0			
Di-n-butyl phthalate	1.0417	0.9286 1.0511	1.0070 1.1526	0.9779 1.1240	1.0335	Ave		1.0396			0.0100	7.0		20.0			
Fluoranthene	1.2068 1.0921	0.9771 1.1054	0.9808 1.2065	1.0529 1.1632	1.0622	Ave		1.0941			0.6000	7.9		20.0			
Benzidine	0.4161	0.4013 0.4157	0.4486 0.4161	0.4405 0.3769	0.4112	Ave		0.4158				5.3		20.0			
Pyrene	1.1083 1.0141	0.9348 1.0253	0.9799 1.1136	1.0313 1.0851	1.0047	Ave		1.0330			0.6000	5.8		20.0			
Butyl benzyl phthalate	0.4117	0.3030 0.4168	0.3398 0.4566	0.3721 0.4485	0.3999	Ave		0.3936			0.0100	13.0		20.0			
3,3'-Dichlorobenzidine	0.3376	0.2357 0.3430	0.2856 0.3836	0.3147 0.3787	0.3322	Ave		0.3264			0.0100	15.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Bis(2-ethylhexyl) phthalate	0.5850	0.4275 0.5823	0.4824 0.6460	0.5244 0.6268	0.5552	Ave		0.5537			0.0100	13.0		20.0			
Benzo[a]anthracene	1.1431 0.9655	0.9030 0.9806	0.9516 1.0563	0.9662 1.0338	0.9569	Ave		0.9952			0.8000	7.2		20.0			
Chrysene	1.0360 0.9055	0.7835 0.9036	0.8447 0.9781	0.8976 0.9717	0.9006	Ave		0.9135			0.7000	8.2		20.0			
Di-n-octyl phthalate	1.1402	0.6157 1.1916	0.7191 1.3337	0.9151 1.3173	1.0931	Linl	-0.503	1.2895			0.0100				0.9960		0.9900
Benzo[b]fluoranthene	0.9596 1.1087	0.8533 1.1495	0.9760 1.2207	1.0128 1.2714	1.1098	Ave		1.0735			0.7000	12.0		20.0			
Benzo[k]fluoranthene	0.9973 1.2058	1.0290 1.2586	1.0981 1.3653	1.1232 1.2605	1.1718	Ave		1.1677			0.7000	10.0		20.0			
Benzo[a]pyrene	0.7710 1.0493	0.8163 1.1001	0.9005 1.2052	0.9519 1.1607	1.0154	Ave		0.9967			0.7000	15.0		20.0			
Indeno[1,2,3-cd]pyrene	1.0612 1.1113	0.9120 1.1724	0.9325 1.2859	1.0117 1.2372	1.1157	Ave		1.0933			0.5000	12.0		20.0			
Dibenz(a,h)anthracene	0.8994 0.9219	0.7442 0.9816	0.7837 1.0774	0.8281 1.0500	0.9168	Ave		0.9115			0.4000	12.0		20.0			
Benzo[g,h,i]perylene	1.0643 0.9223	0.7994 0.9679	0.8200 1.0501	0.8306 1.0224	0.9211	Ave		0.9331			0.5000	11.0		20.0			
2-Fluorophenol (Surr)	1.1122	1.1195 1.1595	1.1312 1.2756	1.0965 1.2281	1.1353	Ave		1.1572				5.4		20.0			
Phenol-d5 (Surr)	1.4695	1.6278 1.5416	1.5768 1.6570	1.3868 1.6105	1.4692	Ave		1.5424				6.1		20.0			
Nitrobenzene-d5 (Surr)	0.4885 0.3570	0.3269 0.3625	0.3360 0.3934	0.3463 0.3939	0.3617	Ave		0.3740				13.0		20.0			
2-Fluorobiphenyl (Surr)	1.6664 1.2044	1.1980 1.2195	1.2253 1.3427	1.2459 1.3189	1.1859	Ave		1.2897				12.0		20.0			
2,4,6-Tribromophenol (Surr)	0.1455	0.1370 0.1470	0.1406 0.1633	0.1415 0.1593	0.1364	Ave		0.1463				6.8		20.0			
Terphenyl-d14 (Surr)	1.0628 0.7324	0.8004 0.7342	0.7073 0.8019	0.7462 0.7796	0.7182	Ave		0.7870				14.0		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81611/6	30411006.D
Level 2	STD2 240-81611/5	30411005.D
Level 3	STD3 240-81611/4	30411004.D
Level 4	STD4 240-81611/3	30411003.D
Level 5	STD5 240-81611/2	30411002.D
Level 6	STD6 240-81611/10	30411010.D
Level 7	STD7 240-81611/9	30411009.D
Level 8	STD8 240-81611/8	30411008.D
Level 9	STD9 240-81611/7	30411007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave		16216	22470	47473	113217		0.500	1.00	2.00	5.00
			236614	318938	456631	613896		10.0	15.0	20.0	25.0	
N-Nitrosodimethylamine	DCB	Ave		11935	21220	48714	132532		0.500	1.00	2.00	5.00
			312475	431177	617209	838090		10.0	15.0	20.0	25.0	
Pyridine	DCB	Ave		21426	43683	94956	241604		0.500	1.00	2.00	5.00
			574011	761099	1133431	1526421		10.0	15.0	20.0	25.0	
Benzaldehyde	DCB	Ave	9652	41129	78743	181212	447558	0.200	1.00	2.00	4.00	10.0
			973909	1287806	1854574	2419130		20.0	30.0	40.0	50.0	
Phenol	DCB	Ave		29924	52217	119402	308524		0.500	1.00	2.00	5.00
			683517	906309	1318676	1800015		10.0	15.0	20.0	25.0	
Aniline	DCB	Ave		34557	64273	145706	382787		0.500	1.00	2.00	5.00
			845753	1140436	1655621	2254888		10.0	15.0	20.0	25.0	
Bis(2-chloroethyl)ether	DCB	Ave		23772	42542	92963	231353		0.500	1.00	2.00	5.00
			514179	700352	1014397	1372859		10.0	15.0	20.0	25.0	
2-Chlorophenol	DCB	Ave		23853	42482	95545	249252		0.500	1.00	2.00	5.00
			541952	741747	1077716	1445797		10.0	15.0	20.0	25.0	
1,3-Dichlorobenzene	DCB	Ave		24460	46541	105773	273536		0.500	1.00	2.00	5.00
			595610	787251	1167765	1564313		10.0	15.0	20.0	25.0	
1,4-Dichlorobenzene	DCB	Ave		25863	47915	102704	283326		0.500	1.00	2.00	5.00
			608860	807048	1170215	1597863		10.0	15.0	20.0	25.0	
Benzyl alcohol	DCB	Ave		13802	27328	62306	156954		0.500	1.00	2.00	5.00
			355010	464490	701146	931573		10.0	15.0	20.0	25.0	
1,2-Dichlorobenzene	DCB	Ave		24202	47938	103511	259307		0.500	1.00	2.00	5.00
			578791	760626	1106213	1506525		10.0	15.0	20.0	25.0	
2-Methylphenol	DCB	Ave		19733	38481	86519	229526		0.500	1.00	2.00	5.00
			503367	666396	992388	1322999		10.0	15.0	20.0	25.0	
bis (2-chloroisopropyl) ether	DCB	Ave		34056	65259	146959	361011		0.500	1.00	2.00	5.00
			827782	1061693	1539760	2048685		10.0	15.0	20.0	25.0	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Indene	DCB	Ave	2040512	85891 2751804	156104 4034385	365529 5494399	916354	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
3 & 4 Methylphenol	DCB	Ave	534212	19065 717322	38715 1041736	92225 1416340	236586	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodi-n-propylamine	DCB	Ave	380422	14155 494855	30501 746863	62719 981255	169804	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acetophenone	DCB	Ave	784632	32595 1038746	59854 1537279	132615 2040968	341535	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachloroethane	DCB	Ave	234155	9469 308811	19869 463611	40239 624884	103497	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene	NPT	Ave	602745	22083 798340	45496 1174656	109090 1602028	266273	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Isophorone	NPT	Ave	1069946	40501 1422719	85728 2113040	183544 2878480	483451	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitrophenol	NPT	Ave	299767	11162 392319	19477 580438	47968 781408	126382	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dimethylphenol	NPT	Ave	548402	22771 734837	41451 1049259	95441 1423353	244364	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Lin	615619	31871 915153	34463 1321942	82973 1843013	241835	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Bis(2-chloroethoxy)methane	NPT	Ave	635518	26240 847988	45666 1251022	107632 1675745	284126	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dichlorophenol	NPT	Ave	460330	16521 610741	33229 921670	77111 1203520	204934	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,4-Trichlorobenzene	NPT	Ave	532016	21585 697687	41318 1007617	91758 1386001	230746	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Naphthalene	NPT	Ave	15367 1628498	66890 2119044	124268 3124385	286602 4217741	729643	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chloroaniline	NPT	Ave	686669	25968 904763	51618 1349033	121294 1821542	298492	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobutadiene	NPT	Ave	324885	12593 434009	25988 619873	56648 844773	139989	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Caprolactam	NPT	Ave	307578	12290 393097	25916 585692	54163 752059	146197	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
4-Chloro-3-methylphenol	NPT	Ave	493306	18631 647307	33930 979841	82015 1315867	215149	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylnaphthalene	NPT	Ave	9966 1101656	45100 1447157	84651 2156428	189083 2906370	475473	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1-Methylnaphthalene	NPT	Ave	10070 1013523	39669 1341167	81772 1993146	176733 2701042	451635	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorocyclopentadiene	ANT	Ave	352302	11210 473002	24092 703575	56659 973410	154932	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,4,5-Tetrachlorobenzene	ANT	Ave		22274	42448	100934	251173		0.500	1.00	2.00	5.00
			575040	757357	1116276	1488320		10.0	15.0	20.0	25.0	
2,4,6-Trichlorophenol	ANT	Ave		12486	25520	61912	156928		0.500	1.00	2.00	5.00
			365061	475201	719538	974731		10.0	15.0	20.0	25.0	
2,4,5-Trichlorophenol	ANT	Ave		11947	25900	64027	166638		0.500	1.00	2.00	5.00
			378966	513976	752941	1019196		10.0	15.0	20.0	25.0	
1,1'-Biphenyl	ANT	Ave	13819	54974	101163	233588	616231	0.100	0.500	1.00	2.00	5.00
			1399472	1814335	2682254	3584486		10.0	15.0	20.0	25.0	
2-Chloronaphthalene	ANT	Ave	10591	40645	79364	181990	455687	0.100	0.500	1.00	2.00	5.00
			1049493	1384207	2038401	2746950		10.0	15.0	20.0	25.0	
2-Nitroaniline	ANT	Ave		12047	23386	51178	143157		0.500	1.00	2.00	5.00
			333811	450748	679648	892305		10.0	15.0	20.0	25.0	
Dimethyl phthalate	ANT	Ave		49472	90860	196808	521385		0.500	1.00	2.00	5.00
			1213193	1591726	2380318	3169045		10.0	15.0	20.0	25.0	
1,3-Dinitrobenzene	ANT	Ave		6063	12949	28524	83408		0.500	1.00	2.00	5.00
			202189	272790	420859	571915		10.0	15.0	20.0	25.0	
2,6-Dinitrotoluene	ANT	Ave		9021	18273	43396	115405		0.500	1.00	2.00	5.00
			277211	362216	541120	745495		10.0	15.0	20.0	25.0	
Acenaphthylene	ANT	Ave	15394	61980	123712	289640	737944	0.100	0.500	1.00	2.00	5.00
			1713120	2264456	3397756	4530188		10.0	15.0	20.0	25.0	
3-Nitroaniline	ANT	Ave		9622	17426	45929	127765		0.500	1.00	2.00	5.00
			298459	407279	614393	807490		10.0	15.0	20.0	25.0	
Acenaphthene	ANT	Ave	12306	46636	86005	197799	506282	0.100	0.500	1.00	2.00	5.00
			1144426	1501648	2225735	3020416		10.0	15.0	20.0	25.0	
2,4-Dinitrophenol	ANT	Linl		+++++	16415	47020	150881		+++++	2.00	4.00	10.0
			389816	543421	846839	1155637		20.0	30.0	40.0	50.0	
4-Nitrophenol	ANT	Ave		8926	21620	53838	146003		1.00	2.00	4.00	10.0
			349554	451620	690447	916895		20.0	30.0	40.0	50.0	
2,4-Dinitrotoluene	ANT	Ave		10980	21056	56656	155258		0.500	1.00	2.00	5.00
			371972	500634	741070	996826		10.0	15.0	20.0	25.0	
Dibenzofuran	ANT	Ave	14723	62615	118010	272285	682932	0.100	0.500	1.00	2.00	5.00
			1566499	2084699	3072843	4168388		10.0	15.0	20.0	25.0	
2,3,4,6-Tetrachlorophenol	ANT	Ave		11272	23549	52142	137950		0.500	1.00	2.00	5.00
			337721	443171	663232	894135		10.0	15.0	20.0	25.0	
Diethyl phthalate	ANT	Ave		53280	95600	210620	540269		0.500	1.00	2.00	5.00
			1221169	1606486	2381820	3224659		10.0	15.0	20.0	25.0	
4-Chlorophenyl phenyl ether	ANT	Ave		26505	52994	114212	293256		0.500	1.00	2.00	5.00
			679997	888302	1322001	1773518		10.0	15.0	20.0	25.0	
4-Nitroaniline	ANT	Ave		9611	20418	47031	133302		0.500	1.00	2.00	5.00
			316074	402223	619876	840862		10.0	15.0	20.0	25.0	
Fluorene	ANT	Ave	11758	48194	98484	216784	565180	0.100	0.500	1.00	2.00	5.00
			1285001	1715125	2549442	3399694		10.0	15.0	20.0	25.0	

FORM VI

GC/MS SEMI VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HPl0 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4,6-Dinitro-2-methylphenol	PHN	Linl	521792	9577 687048	24885 1067240	64543 1444264	208660	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
N-Nitrosodiphenylamine	PHN	Ave	1935122	72547 2548336	138810 3811548	316413 5139794	820810	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	1282930	50341 1684936	96537 2525643	214273 3358653	557654	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Azobenzene	PHN	Ave	1275629	50309 1684573	96999 2525643	214273 3358700	557619	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Bromophenyl phenyl ether	PHN	Ave	358827	12979 480803	27021 708183	62072 962693	158021	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobenzene	PHN	Ave	3107 360567	14818 466336	28543 700791	61873 965125	163849	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Atrazine	PHN	Ave	748683	26777 947131	53965 1386960	126618 1827685	331047	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Pentachlorophenol	PHN	Ave	502665	13906 639454	31861 1004742	75597 1367227	217571	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Phenanthrene	PHN	Ave	18717 1836638	73146 2415849	141845 3587420	311780 4796788	802921	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Anthracene	PHN	Ave	16288 1885354	69781 2473597	138944 3719428	315893 4982659	812471	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Carbazole	PHN	Ave	1687265	67174 2208075	131456 3327408	294031 4521809	746052	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-butyl phthalate	PHN	Ave	2109283	79716 2780848	158879 4202076	337508 5635613	908739	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluoranthene	PHN	Ave	22172 2211161	83881 2924418	154743 4398503	363378 5831952	933990	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzidine	CRY	Ave	1838302	71149 2393102	146604 3323668	322117 4153761	789265	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Pyrene	CRY	Ave	20499 2239972	82865 2951426	160116 4447349	377058 5979420	964230	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Butyl benzyl phthalate	CRY	Ave	909395	26854 1199894	55525 1823367	136037 2471624	383811	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3,3'-Dichlorobenzidine	CRY	Ave	1491428	41792 1974516	93330 3063990	230130 4172967	637656	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	1292173	37896 1676382	78819 2580079	191723 3454084	532849	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[a]anthracene	CRY	Ave	21142 2132546	80043 2822861	155494 4218541	353258 5696707	918310	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Chrysene	CRY	Ave	19161 1999965	69446 2601044	138022 3906119	328187 5354526	864351	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-octyl phthalate	PRY	Linl	1981231	42479 2634916	93267 4175696	269976 5738584	828145	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23592-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzo[b]fluoranthene	PRY	Ave	14443 1926505	58877 2541953	126589 3822093	298800 5538757	840758	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[k]fluoranthene	PRY	Ave	15010 2095142	70996 2783215	142426 4274606	331366 5491211	887719	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[a]pyrene	PRY	Ave	11605 1823222	56321 2432666	116802 3773468	280829 5056335	769294	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Indeno[1,2,3-cd]pyrene	PRY	Ave	15972 1931031	62924 2592538	120947 4025972	298487 5389622	845237	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dibenz(a,h)anthracene	PRY	Ave	13537 1601821	51347 2170597	101656 3373446	244309 4574297	694560	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[g,h,i]perylene	PRY	Ave	16019 1602658	55155 2140344	106360 3287841	245044 4453982	697853	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorophenol (Surr)	DCB	Ave	518302	21754 690564	41692 1019750	90958 1374472	234391	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Phenol-d5 (Surr)	DCB	Ave	684817	31631 918111	58117 1324647	115038 1802479	303341	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene-d5 (Surr)	NPT	Ave	7773 634034	24603 851694	47979 1253671	107870 1687586	285992	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorobiphenyl (Surr)	ANT	Ave	16236 1307821	54644 1749682	103329 2588455	232548 3475644	579916	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Tribromophenol (Surr)	ANT	Ave	158023	6248 210950	11857 314870	26408 419685	66719	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Terphenyl-d14 (Surr)	CRY	Ave	19657 1617749	70948 2113488	115574 3202684	272821 4296101	689248	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5593		9.46	10.0	-5.4	30.0
N-Nitrosodimethylamine	Ave	0.6668	0.7036		10.6	10.0	5.5	30.0
Pyridine	Ave	1.237	1.378		11.1	10.0	11.4	30.0
Benzaldehyde	Ave	1.088	1.151	0.0100	21.2	20.0	5.8	30.0
Phenol	Ave	1.517	1.647	0.8000	10.9	10.0	8.6	30.0
Aniline	Ave	1.869	2.013		10.8	10.0	7.7	30.0
Bis(2-chloroethyl)ether	Ave	1.174	1.246	0.7000	10.6	10.0	6.1	30.0
2-Chlorophenol	Ave	1.223	1.305	0.8000	10.7	10.0	6.7	30.0
1,3-Dichlorobenzene	Ave	1.322	1.426		10.8	10.0	7.8	30.0
1,4-Dichlorobenzene	Ave	1.349	1.476		10.9	10.0	9.4	30.0
Benzyl alcohol	Ave	0.7768	0.8665		11.2	10.0	11.6	30.0
1,2-Dichlorobenzene	Ave	1.287	1.390		10.8	10.0	8.0	30.0
2-Methylphenol	Ave	1.105	1.225	0.7000	11.1	10.0	10.9	30.0
bis (2-chloroisopropyl) ether	Ave	1.795	2.305		9.25	7.20	28.4	30.0
Indene	Ave	2.278	2.448		21.5	20.0	7.4	30.0
3 & 4 Methylphenol	Ave	1.151	1.289		11.2	10.0	12.0	30.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.8916	0.5000	10.8	10.0	8.2	30.0
Acetophenone	Ave	1.716	1.861	0.0100	10.8	10.0	8.5	30.0
Hexachloroethane	Ave	0.5215	0.5613	0.3000	10.8	10.0	7.6	30.0
Nitrobenzene	Ave	0.3401	0.3689	0.2000	10.8	10.0	8.5	30.0
Isophorone	Ave	0.6103	0.6861	0.4000	11.2	10.0	12.4	30.0
2-Nitrophenol	Ave	0.1624	0.1809	0.1000	11.1	10.0	11.4	30.0
2,4-Dimethylphenol	Ave	0.3114	0.3269	0.2000	10.5	10.0	5.0	30.0
Benzoic acid	Lin		0.2115		21.3	20.0	6.7	30.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3816	0.3000	10.6	10.0	6.2	30.0
2,4-Dichlorophenol	Ave	0.2560	0.2820	0.2000	11.0	10.0	10.1	30.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.3259		10.9	10.0	8.7	30.0
Naphthalene	Ave	0.9279	1.002	0.7000	10.8	10.0	7.9	30.0
4-Chloroaniline	Ave	0.3867	0.4119	0.0100	10.7	10.0	6.5	30.0
Hexachlorobutadiene	Ave	0.1834	0.1927	0.0100	10.5	10.0	5.1	30.0
Caprolactam	Ave	0.0877	0.0951	0.0100	21.7	20.0	8.4	30.0
4-Chloro-3-methylphenol	Ave	0.2736	0.3035	0.2000	11.1	10.0	11.0	30.0
2-Methylnaphthalene	Ave	0.6242	0.6650	0.4000	10.7	10.0	6.5	30.0
1-Methylnaphthalene	Ave	0.5854	0.6077		10.4	10.0	3.8	30.0
Hexachlorocyclopentadiene	Ave	0.3175	0.3659	0.0500	11.5	10.0	15.2	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.5788	0.0100	10.9	10.0	9.0	30.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3734	0.2000	11.3	10.0	13.2	30.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3828	0.2000	11.2	10.0	11.9	30.0
1,1'-Biphenyl	Ave	1.293	1.393	0.0100	10.8	10.0	7.7	30.0
2-Chloronaphthalene	Ave	0.9841	1.075	0.8000	10.9	10.0	9.3	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3026	0.3474	0.0100	11.5	10.0	14.8	30.0
Dimethyl phthalate	Ave	1.118	1.229	0.0100	11.0	10.0	9.9	30.0
1,3-Dinitrobenzene	Ave	0.1777	0.2075		11.7	10.0	16.8	30.0
2,6-Dinitrotoluene	Ave	0.2443	0.2876		11.8	10.0	17.7	30.0
Acenaphthylene	Ave	1.567	1.776	0.9000	11.3	10.0	13.3	30.0
3-Nitroaniline	Ave	0.2636	0.3091	0.0100	11.7	10.0	17.3	30.0
2,4-Dinitrophenol	Lin1		0.1970	0.0100	19.8	20.0	-0.8	30.0
Acenaphthene	Ave	1.089	1.180	0.9000	10.8	10.0	8.4	30.0
4-Nitrophenol	Ave	0.1489	0.1818		24.4	20.0	22.1	30.0
2,4-Dinitrotoluene	Ave	0.3207	0.3752	0.2000	11.7	10.0	17.0	30.0
Dibenzofuran	Ave	1.468	1.604	0.8000	10.9	10.0	9.3	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.2989	0.3408	0.0100	11.4	10.0	14.0	30.0
Diethyl phthalate	Ave	1.155	1.261	0.0100	10.9	10.0	9.2	30.0
4-Chlorophenyl phenyl ether	Ave	0.6282	0.6959	0.4000	11.1	10.0	10.8	30.0
4-Nitroaniline	Ave	0.2737	0.3216	0.0100	11.7	10.0	17.5	30.0
Fluorene	Ave	1.193	1.339	0.9000	11.2	10.0	12.2	30.0
4,6-Dinitro-2-methylphenol	Lin1		0.1475	0.0100	21.7	20.0	8.3	30.0
N-Nitrosodiphenylamine	Ave	0.4728	0.5209	0.0100	22.0	20.0	10.2	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.6357	0.7132		11.2	10.0	12.2	30.0
Azobenzene	Ave	0.6357	0.7132		11.2	10.0	12.2	30.0
4-Bromophenyl phenyl ether	Ave	0.1784	0.1987	0.1000	11.1	10.0	11.4	30.0
Hexachlorobenzene	Ave	0.1808	0.2025	0.1000	11.2	10.0	12.0	30.0
Atrazine	Ave	0.1794	0.2047	0.0100	22.8	20.0	14.1	30.0
Pentachlorophenol	Ave	0.1168	0.1432	0.0500	24.5	20.0	22.6	30.0
Phenanthrene	Ave	0.9275	1.010	0.7000	10.9	10.0	8.9	30.0
Anthracene	Ave	0.9222	1.057	0.7000	11.5	10.0	14.7	30.0
Carbazole	Ave	0.8498	0.9250	0.0100	10.9	10.0	8.8	30.0
Di-n-butyl phthalate	Ave	1.040	1.161	0.0100	11.2	10.0	11.6	30.0
Fluoranthene	Ave	1.094	1.196	0.6000	10.9	10.0	9.3	30.0
Benzidine	Ave	0.4158	0.5136		24.7	20.0	23.5	30.0
Pyrene	Ave	1.033	1.171	0.6000	11.3	10.0	13.4	30.0
Butyl benzyl phthalate	Ave	0.3936	0.4821	0.0100	12.2	10.0	22.5	30.0
3,3'-Dichlorobenzidine	Ave	0.3264	0.3892	0.0100	23.8	20.0	19.2	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.5537	0.6586	0.0100	11.9	10.0	18.9	30.0
Benzo[a]anthracene	Ave	0.995	1.126	0.8000	11.3	10.0	13.1	30.0
Chrysene	Ave	0.9135	1.061	0.7000	11.6	10.0	16.1	30.0
Di-n-octyl phthalate	Lin1		1.315	0.0100	10.6	10.0	5.9	30.0
Benzo[b]fluoranthene	Ave	1.074	1.235	0.7000	11.5	10.0	15.0	30.0
Benzo[k]fluoranthene	Ave	1.168	1.338	0.7000	11.5	10.0	14.6	30.0
Benzo[a]pyrene	Ave	0.997	1.181	0.7000	11.8	10.0	18.5	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	1.093	1.210	0.5000	11.1	10.0	10.6	30.0
Dibenz(a,h)anthracene	Ave	0.9115	1.061	0.4000	11.6	10.0	16.4	30.0
Benzo[g,h,i]perylene	Ave	0.9331	1.039	0.5000	11.1	10.0	11.3	30.0
2-Fluorophenol (Surr)	Ave	1.157	1.336		11.5	10.0	15.5	30.0
Phenol-d5 (Surr)	Ave	1.542	1.792		11.6	10.0	16.2	30.0
Nitrobenzene-d5 (Surr)	Ave	0.3740	0.4322		11.6	10.0	15.6	30.0
2-Fluorobiphenyl (Surr)	Ave	1.290	1.493		11.6	10.0	15.8	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1463	0.1771		12.1	10.0	21.0	30.0
Terphenyl-d14 (Surr)	Ave	0.7870	0.9254		11.8	10.0	17.6	30.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Instrument ID: A4HP10 Start Date: 04/29/2013 09:24

Analysis Batch Number: 83926 End Date: 04/29/2013 20:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-83926/1		04/29/2013 09:24	1	30429001.D	DB-624 0.18(mm)
CCVIS 240-83926/2		04/29/2013 09:48	1	30429002.D	DB-624 0.18(mm)
MB 240-83555/12-A		04/29/2013 10:11	1	30429003.D	DB-624 0.18(mm)
LCS 240-83555/13-A		04/29/2013 10:35	1	30429004.D	DB-624 0.18(mm)
ZZZZZ		04/29/2013 18:04	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 18:28	1		DB-624 0.18(mm)
240-23592-3	MRC-MW91A-042313	04/29/2013 18:52	1	30429025.D	DB-624 0.18(mm)
240-23592-5	MRC-MW-58A-042313	04/29/2013 19:15	1	30429026.D	DB-624 0.18(mm)
240-23592-7	MRC-MW-22B-042313	04/29/2013 19:39	1	30429027.D	DB-624 0.18(mm)
240-23592-2	MRC-MW90B-042313	04/29/2013 20:03	1	30429028.D	DB-624 0.18(mm)
ZZZZZ		04/29/2013 20:26	1		DB-624 0.18(mm)
ZZZZZ		04/29/2013 20:50	1		DB-624 0.18(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab File ID: 30429001.D DFTPP Injection Date: 04/29/2013

Instrument ID: A4HP10 DFTPP Injection Time: 09:24

Analysis Batch No.: 83926

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	41.1	
68	Less than 2.0% of mass 69	0.6	(1.3)1
69	Mass 69 relative abundance	44.7	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	51.1	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	22.1	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	11.0	
442	40.0 - 110.0% of mass 198	67.6	
443	15.0 - 24.0% of mass 442	13.0	(19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-83926/2	30429002.D	04/29/2013	09:48
	MB 240-83555/12-A	30429003.D	04/29/2013	10:11
	LCS 240-83555/13-A	30429004.D	04/29/2013	10:35
MRC-MW91A-042313	240-23592-3	30429025.D	04/29/2013	18:52
MRC-MW-58A-042313	240-23592-5	30429026.D	04/29/2013	19:15
MRC-MW-22B-042313	240-23592-7	30429027.D	04/29/2013	19:39
MRC-MW90B-042313	240-23592-2	30429028.D	04/29/2013	20:03

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVIS 240-83926/2 Calibration Date: 04/29/2013 09:48

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30429002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5280		8.93	10.0	-10.7	20.0
N-Nitrosodimethylamine	Ave	0.6668	0.6754		10.1	10.0	1.3	20.0
Pyridine	Ave	1.237	1.308		10.6	10.0	5.8	20.0
Benzaldehyde	Ave	1.088	1.013	0.0100	18.6	20.0	-6.9	20.0
Phenol	Ave	1.517	1.490	0.8000	9.82	10.0	-1.8	20.0
Aniline	Ave	1.869	1.841		9.85	10.0	-1.5	20.0
Bis(2-chloroethyl)ether	Ave	1.174	1.183	0.7000	10.1	10.0	0.7	20.0
2-Chlorophenol	Ave	1.223	1.171	0.8000	9.57	10.0	-4.3	20.0
1,3-Dichlorobenzene	Ave	1.322	1.312		9.92	10.0	-0.8	20.0
1,4-Dichlorobenzene	Ave	1.349	1.346		9.98	10.0	-0.2	20.0
Benzyl alcohol	Ave	0.7768	0.7252		9.34	10.0	-6.6	20.0
1,2-Dichlorobenzene	Ave	1.287	1.245		9.67	10.0	-3.3	20.0
2-Methylphenol	Ave	1.105	1.047	0.7000	9.48	10.0	-5.2	20.0
bis (2-chloroisopropyl) ether	Ave	1.795	1.628		9.07	10.0	-9.3	20.0
Indene	Ave	2.278	2.192		19.2	20.0	-3.8	20.0
3 & 4 Methylphenol	Ave	1.151	1.102		9.58	10.0	-4.2	20.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.7860	0.5000	9.54	10.0	-4.6	20.0
Acetophenone	Ave	1.716	1.633	0.0100	9.51	10.0	-4.9	20.0
Hexachloroethane	Ave	0.5215	0.5191	0.3000	9.95	10.0	-0.5	20.0
Nitrobenzene	Ave	0.3401	0.3515	0.2000	10.3	10.0	3.4	20.0
Isophorone	Ave	0.6103	0.6215	0.4000	10.2	10.0	1.8	20.0
2-Nitrophenol	Ave	0.1624	0.1615	0.1000	9.95	10.0	-0.5	20.0
2,4-Dimethylphenol	Ave	0.3114	0.2962	0.2000	9.51	10.0	-4.9	20.0
Benzoic acid	Lin		0.1833		18.7	20.0	-6.4	20.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3787	0.3000	10.5	10.0	5.4	20.0
2,4-Dichlorophenol	Ave	0.2560	0.2571	0.2000	10.0	10.0	0.4	20.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.2823		9.41	10.0	-5.9	20.0
Naphthalene	Ave	0.9279	0.8962	0.7000	9.66	10.0	-3.4	20.0
4-Chloroaniline	Ave	0.3867	0.3904	0.0100	10.1	10.0	0.9	20.0
Hexachlorobutadiene	Ave	0.1834	0.1667	0.0100	9.09	10.0	-9.1	20.0
Caprolactam	Ave	0.0877	0.0972	0.0100	22.2	20.0	10.8	20.0
4-Chloro-3-methylphenol	Ave	0.2736	0.2539	0.2000	9.28	10.0	-7.2	20.0
2-Methylnaphthalene	Ave	0.6242	0.6078	0.4000	9.74	10.0	-2.6	20.0
1-Methylnaphthalene	Ave	0.5854	0.5581		9.53	10.0	-4.7	20.0
Hexachlorocyclopentadiene	Ave	0.3175	0.2463	0.0500	7.76	10.0	-22.4*	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.4653	0.0100	8.76	10.0	-12.4	20.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3122	0.2000	9.46	10.0	-5.4	20.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3210	0.2000	9.38	10.0	-6.2	20.0
1,1'-Biphenyl	Ave	1.293	1.171	0.0100	9.06	10.0	-9.4	20.0
2-Chloronaphthalene	Ave	0.9841	0.9431	0.8000	9.58	10.0	-4.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVIS 240-83926/2 Calibration Date: 04/29/2013 09:48

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30429002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3026	0.2941	0.0100	9.72	10.0	-2.8	20.0
Dimethyl phthalate	Ave	1.118	1.105	0.0100	9.88	10.0	-1.2	20.0
1,3-Dinitrobenzene	Ave	0.1777	0.1685		9.48	10.0	-5.2	20.0
2,6-Dinitrotoluene	Ave	0.2443	0.2409		9.86	10.0	-1.4	20.0
Acenaphthylene	Ave	1.567	1.467	0.9000	9.36	10.0	-6.4	20.0
3-Nitroaniline	Ave	0.2636	0.2703	0.0100	10.3	10.0	2.5	20.0
Acenaphthene	Ave	1.089	0.9501	0.9000	8.72	10.0	-12.8	20.0
2,4-Dinitrophenol	Lin1		0.1352	0.0100	14.1	20.0	-29.5*	20.0
4-Nitrophenol	Ave	0.1489	0.1507		20.2	20.0	1.2	20.0
2,4-Dinitrotoluene	Ave	0.3207	0.3216	0.2000	10.0	10.0	0.3	20.0
Dibenzofuran	Ave	1.468	1.344	0.8000	9.16	10.0	-8.4	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2989	0.2470	0.0100	8.26	10.0	-17.4	20.0
Diethyl phthalate	Ave	1.155	1.079	0.0100	9.35	10.0	-6.5	20.0
4-Chlorophenyl phenyl ether	Ave	0.6282	0.5248	0.4000	8.35	10.0	-16.5	20.0
4-Nitroaniline	Ave	0.2737	0.2825	0.0100	10.3	10.0	3.2	20.0
Fluorene	Ave	1.193	1.115	0.9000	9.34	10.0	-6.6	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1130	0.0100	16.8	20.0	-16.1	20.0
N-Nitrosodiphenylamine	Ave	0.4728	0.4924	0.0100	20.8	20.0	4.1	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.6357	0.7135		11.2	10.0	12.3	20.0
Azobenzene	Ave	0.6357	0.7135		11.2	10.0	12.3	20.0
4-Bromophenyl phenyl ether	Ave	0.1784	0.1660	0.1000	9.31	10.0	-6.9	20.0
Hexachlorobenzene	Ave	0.1808	0.1642	0.1000	9.08	10.0	-9.2	20.0
Atrazine	Ave	0.1794	0.1832	0.0100	20.4	20.0	2.1	20.0
Pentachlorophenol	Ave	0.1168	0.1167	0.0500	20.0	20.0	-0.1	20.0
Phenanthrene	Ave	0.9275	0.9396	0.7000	10.1	10.0	1.3	20.0
Anthracene	Ave	0.9222	0.9501	0.7000	10.3	10.0	3.0	20.0
Carbazole	Ave	0.8498	0.8465	0.0100	9.96	10.0	-0.4	20.0
Di-n-butyl phthalate	Ave	1.040	1.108	0.0100	10.7	10.0	6.6	20.0
Fluoranthene	Ave	1.094	1.025	0.6000	9.37	10.0	-6.3	20.0
Benzidine	Ave	0.4158	0.3080		14.8	20.0	-25.9*	20.0
Pyrene	Ave	1.033	1.021	0.6000	9.88	10.0	-1.2	20.0
Butyl benzyl phthalate	Ave	0.3936	0.4663	0.0100	11.8	10.0	18.5	20.0
3,3'-Dichlorobenzidine	Ave	0.3264	0.3106	0.0100	19.0	20.0	-4.8	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.5537	0.6505	0.0100	11.7	10.0	17.5	20.0
Benzo[a]anthracene	Ave	0.995	0.9159	0.8000	9.20	10.0	-8.0	20.0
Chrysene	Ave	0.9135	0.8745	0.7000	9.57	10.0	-4.3	20.0
Di-n-octyl phthalate	Lin1		1.413	0.0100	11.3	10.0	13.5	20.0
Benzo[b]fluoranthene	Ave	1.074	1.077	0.7000	10.0	10.0	0.3	20.0
Benzo[k]fluoranthene	Ave	1.168	1.258	0.7000	10.8	10.0	7.7	20.0
Benzo[a]pyrene	Ave	0.997	1.028	0.7000	10.3	10.0	3.1	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVIS 240-83926/2 Calibration Date: 04/29/2013 09:48

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30429002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Ave	1.093	1.113	0.5000	10.2	10.0	1.8	20.0
Dibenz(a,h)anthracene	Ave	0.9115	0.8777	0.4000	9.63	10.0	-3.7	20.0
Benzo[g,h,i]perylene	Ave	0.9331	0.9519	0.5000	10.2	10.0	2.0	20.0
2-Fluorophenol (Surr)	Ave	1.157	1.166		10.1	10.0	0.7	20.0
Phenol-d5 (Surr)	Ave	1.542	1.483		9.62	10.0	-3.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3740	0.3706		9.91	10.0	-0.9	20.0
2-Fluorobiphenyl (Surr)	Ave	1.290	1.139		8.83	10.0	-11.7	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1463	0.1163		7.94	10.0	-20.6*	20.0
Terphenyl-d14 (Surr)	Ave	0.7870	0.6813		8.66	10.0	-13.4	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Lab File ID: 30429003.D Lab Sample ID: MB 240-83555/12-A

Matrix: Water Date Extracted: 04/25/2013 10:37

Instrument ID: A4HP10 Date Analyzed: 04/29/2013 10:11

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-83555/13-A	30429004.D	04/29/2013 10:35
MRC-MW91A-042313	240-23592-3	30429025.D	04/29/2013 18:52
MRC-MW-58A-042313	240-23592-5	30429026.D	04/29/2013 19:15
MRC-MW-22B-042313	240-23592-7	30429027.D	04/29/2013 19:39
MRC-MW90B-042313	240-23592-2	30429028.D	04/29/2013 20:03

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23592-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-83555/12-A

Matrix: Water | Lab File ID: 30429003.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/25/2013 10:37

Sample wt/vol: 1000(mL) | Date Analyzed: 04/29/2013 10:11

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 83926 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	71		20-110
367-12-4	2-Fluorophenol (Surr)	82		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	78		21-110
4165-62-2	Phenol-d5 (Surr)	81		21-110
1718-51-0	Terphenyl-d14 (Surr)	65		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30429004.D

Lab ID: LCS 240-83555/13-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	13.1	65	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		186412	5.95	710480	7.06	434356	8.57
UPPER LIMIT		372824	6.45	1420960	7.56	868712	9.07
LOWER LIMIT		93206	5.45	355240	6.56	217178	8.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		174408	5.95	682302	7.06	409364	8.57
CCVIS 240-83926/2		176773	5.89	666249	7.01	410924	8.51

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		809912	9.84	883495	12.45	695044	14.57
UPPER LIMIT		1619824	10.34	1766990	12.95	1390088	15.07
LOWER LIMIT		404956	9.34	441748	11.95	347522	14.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		751682	9.84	793717	12.45	637005	14.57
CCVIS 240-83926/2		684730	9.78	712125	12.35	510404	14.45

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Sample No.: CCVIS 240-83926/2 Date Analyzed: 04/29/2013 09:48

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30429002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		176773	5.89	666249	7.01	410924	8.51
UPPER LIMIT		353546	6.39	1332498	7.51	821848	9.01
LOWER LIMIT		88387	5.39	333125	6.51	205462	8.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-83555/12-A		141077	5.89	563650	7.01	319732	8.51
LCS 240-83555/13-A		150729	5.89	586678	7.01	358708	8.51
240-23592-3	MRC-MW91A-042313	161696	5.89	624984	7.01	357465	8.51
240-23592-5	MRC-MW-58A-042313	168380	5.89	653676	7.01	386368	8.51
240-23592-7	MRC-MW-22B-042313	175472	5.89	703732	7.01	403463	8.51
240-23592-2	MRC-MW90B-042313	166949	5.89	657045	7.01	389230	8.51

DCB = 1,4-Dichlorobenzene-d4

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

NPT = Naphthalene-d8

Area Limit = 50%-200% of internal standard area

ANT = Acenaphthene-d10

RT Limit = ± 0.5 minutes of internal standard RT

ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Sample No.: CCVIS 240-83926/2 Date Analyzed: 04/29/2013 09:48

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30429002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		684730	9.78	712125	12.35	510404	14.45
UPPER LIMIT		1369460	10.28	1424250	12.85	1020808	14.95
LOWER LIMIT		342365	9.28	356063	11.85	255202	13.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-83555/12-A		532922	9.78	533007	12.35	402130	14.44
LCS 240-83555/13-A		591656	9.78	635627	12.35	467902	14.44
240-23592-3	MRC-MW91A-042313	618989	9.78	638218	12.35	462893	14.44
240-23592-5	MRC-MW-58A-042313	647065	9.78	656699	12.35	501570	14.44
240-23592-7	MRC-MW-22B-042313	700905	9.78	703168	12.35	524833	14.44
240-23592-2	MRC-MW90B-042313	683089	9.78	725140	12.35	556485	14.44

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area

PRY = Perylene-d12

RT Limit = ± 0.5 minutes of internal standard RT

PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23592-1

SDG No.:

Batch Number: 83555 Batch Start Date: 04/25/13 11:51 Batch Analyst: Cerne, Amanda

Batch Method: 3520C Batch End Date: 04/26/13 05:51

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	EXBNALCS1 00035	EXBNASURRW 00024
240-23592-E-2	MRC-MW90B-042313	3520C, 8270D	T	1000 mL	2 mL	10	2		1 mL
240-23592-A-3	MRC-MW91A-042313	3520C, 8270D	T	1010 mL	2 mL	7	2		1 mL
240-23592-D-5	MRC-MW-58A-042313	3520C, 8270D	T	1010 mL	2 mL	7	2		1 mL
240-23592-E-7	MRC-MW-22B-042313	3520C, 8270D	T	1020 mL	2 mL	7	2		1 mL
MB 240-83555/12		3520C, 8270D		1000 mL	2 mL	7	2		1 mL
LCS 240-83555/13		3520C, 8270D		1000 mL	2 mL	7	2	1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXRESTEKSPKW 00019
240-23592-E-2	MRC-MW90B-042313	3520C, 8270D	T	
240-23592-A-3	MRC-MW91A-042313	3520C, 8270D	T	
240-23592-D-5	MRC-MW-58A-042313	3520C, 8270D	T	
240-23592-E-7	MRC-MW-22B-042313	3520C, 8270D	T	
MB 240-83555/12		3520C, 8270D		
LCS 240-83555/13		3520C, 8270D		1 mL

Batch Notes	
Acid used for pH adjust Lot #	711898
Na2SO4 Lot Number	857424
Prep Solvent Lot #	944688

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE ID MRC-MW91A-042313

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST	IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	CONCENTRATION PPB
161696	1	56610	4	2000	0.5910	4.69
			Amt. inj	Sample Volume (ML)		
			1	1010		

1,4-Dioxane = 4.7 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\NCChrom\ChromData\A4HP10\20130429-19353.b\30429025.D		
Lims ID:	240-23592-A-3-A	Client ID:	MRC-MW91A-042313
Inject. Date:	29-Apr-2013 18:52:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0019353-025		
Misc. Info.:	240-23592-A-3-A		
Operator:	001710	Instrument ID:	A4HP10
Injection Vol:	1.0 ul	ALS Bottle#:	25
Lims Batch ID:	83926	Lims Sample ID:	25
Detector:	MS SCAN		
Method:	\\NCChrom\ChromData\A4HP10\20130429-19353.b\8270_10.m		
Last Update:	30-Apr-2013 11:38:12	Calib Date:	12-Apr-2013 00:58:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCChrom\ChromData\A4HP10\20130411-18790.b\30411019.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK021		
First Level Reviewer: gruberj		Date:	30-Apr-2013 11:35:59

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.894	5.894	0.0	97	161696	4.00	
* 2 Naphthalene-d8	136	7.010	7.010	0.0	100	624984	4.00	
* 3 Acenaphthene-d10	164	8.509	8.509	0.0	91	357465	4.00	
* 4 Phenanthrene-d10	188	9.778	9.778	0.0	97	618989	4.00	
* 5 Chrysene-d12	240	12.345	12.351	-0.006	81	638218	4.00	
* 6 Perylene-d12	264	14.443	14.449	-0.006	85	462893	4.00	
$ 7 2-Fluorophenol	112	4.648	4.648	0.0	92	508736	10.9	
$ 8 Phenol-d5	99	5.536	5.536	0.0	99	667796	10.7	
$ 9 Nitrobenzene-d5	82	6.376	6.376	0.0	89	415560	7.11	
$ 10 2-Fluorobiphenyl (Surr)	172	7.921	7.921	0.0	100	740939	6.43	
$ 11 2,4,6-Tribromophenol	330	9.178	9.178	0.0	85	133853	10.2	
$ 12 Terphenyl-d14	244	11.141	11.141	0.0	99	709890	5.65	
25 1,4-Dioxane	88	2.480	2.480	0.0	90	56610	2.37	M

QC Flag Legend

Review Flags
M - Manually Integrated

6850

Perchlorate by LC/MS or LC/MS/MS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Instrument ID: A5 Start Date: 05/07/2013 23:05

Analysis Batch Number: 15859 End Date: 05/08/2013 18:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/07/2013 23:05	1		Anion HR 4.6(mm)
ICB 320-15859/2		05/07/2013 23:22	1	07MAY13-Perc-004.d	Anion HR 4.6(mm)
STD01 320-15859/3 IC		05/07/2013 23:39	1	07MAY13-Perc-005.d	Anion HR 4.6(mm)
STD02 320-15859/4 IC		05/07/2013 23:55	1	07MAY13-Perc-006.d	Anion HR 4.6(mm)
STD03 320-15859/5 IC		05/08/2013 00:12	1	07MAY13-Perc-007.d	Anion HR 4.6(mm)
STD04 320-15859/6 ICISAV		05/08/2013 00:29	1	07MAY13-Perc-008.d	Anion HR 4.6(mm)
STD05 320-15859/7 IC		05/08/2013 00:46	1	07MAY13-Perc-009.d	Anion HR 4.6(mm)
STD06 320-15859/8 IC		05/08/2013 01:02	1	07MAY13-Perc-010.d	Anion HR 4.6(mm)
STD07 320-15859/9 IC		05/08/2013 01:19	1	07MAY13-Perc-011.d	Anion HR 4.6(mm)
STD08 320-15859/10 IC		05/08/2013 01:36	1	07MAY13-Perc-012.d	Anion HR 4.6(mm)
CCB 320-15859/11		05/08/2013 01:52	1	07MAY13-Perc-013.d	Anion HR 4.6(mm)
ICV 320-15859/12		05/08/2013 02:09	1	07MAY13-Perc-014.d	Anion HR 4.6(mm)
CCB 320-15859/18		05/08/2013 03:49	1	07MAY13-Perc-020.d	Anion HR 4.6(mm)
CCVL 320-15859/19		05/08/2013 04:06	1	07MAY13-Perc-021.d	Anion HR 4.6(mm)
ZZZZZ		05/08/2013 04:23	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 04:40	1		Anion HR 4.6(mm)
INF 320-15421/3-A		05/08/2013 04:56	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 05:13	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 05:30	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 05:46	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 06:03	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 06:20	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 06:36	1		Anion HR 4.6(mm)
CCV 320-15859/29		05/08/2013 06:53	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 07:10	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 07:27	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 07:43	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 08:00	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 08:17	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 08:34	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 08:50	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 09:07	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 09:24	1		Anion HR 4.6(mm)
CCV 320-15859/39		05/08/2013 09:40	1	07MAY13-Perc-041.d	Anion HR 4.6(mm)
ZZZZZ		05/08/2013 09:57	50		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 10:14	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 10:30	20		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 10:47	1		Anion HR 4.6(mm)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Instrument ID: A5 Start Date: 05/07/2013 23:05

Analysis Batch Number: 15859 End Date: 05/08/2013 18:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
MB 320-15484/1-A		05/08/2013 11:04	1	07MAY13-Perc-046.d	Anion HR 4.6(mm)
LCS 320-15484/2-A		05/08/2013 11:21	1	07MAY13-Perc-047.d	Anion HR 4.6(mm)
INF 320-15484/3-A		05/08/2013 11:37	1	07MAY13-Perc-048.d	Anion HR 4.6(mm)
ZZZZZ		05/08/2013 11:54	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 12:11	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 12:27	10		Anion HR 4.6(mm)
CCV 320-15859/50		05/08/2013 12:44	1	07MAY13-Perc-052.d	Anion HR 4.6(mm)
ZZZZZ		05/08/2013 13:01	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 13:18	10		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 13:34	10		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 13:51	20		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 14:08	20		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 14:24	20		Anion HR 4.6(mm)
240-23592-2	MRC-MW90B-042313	05/08/2013 14:41	1	07MAY13-Perc-059.d	Anion HR 4.6(mm)
240-23592-2 MS	MRC-MW90B-042313 MS	05/08/2013 14:58	1	07MAY13-Perc-060.d	Anion HR 4.6(mm)
240-23592-2 MSD	MRC-MW90B-042313 MSD	05/08/2013 15:15	1	07MAY13-Perc-061.d	Anion HR 4.6(mm)
240-23592-4	MRC-MW75A-042313	05/08/2013 15:31	1	07MAY13-Perc-062.d	Anion HR 4.6(mm)
CCV 320-15859/61		05/08/2013 15:48	1	07MAY13-Perc-063.d	Anion HR 4.6(mm)
ZZZZZ		05/08/2013 16:05	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 16:21	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 16:38	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 16:55	1		Anion HR 4.6(mm)
ZZZZZ		05/08/2013 17:12	1		Anion HR 4.6(mm)
CCV 320-15859/66		05/08/2013 17:28	1		Anion HR 4.6(mm)
CCVL 320-15859/67		05/08/2013 17:45	1	07MAY13-Perc-070.d	Anion HR 4.6(mm)
CCB 320-15859/68		05/08/2013 18:02	1	07MAY13-Perc-071.d	Anion HR 4.6(mm)

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2013-05-07 12:39		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.00	112.99	0.10	0.01	Pass	0.65	0.70	0.10	-0.05	Pass	46126	0	Pass
302.01	302.00	0.10	0.01	Pass	0.68	0.70	0.10	-0.02	Pass	93223	0	Pass
602.00	601.98	0.10	0.02	Pass	0.64	0.70	0.10	-0.06	Pass	561508	0	Pass
1033.97	1033.99	0.10	-0.02	Pass	0.64	0.70	0.10	-0.06	Pass	434134	0	Pass
1333.96	1333.97	0.10	-0.01	Pass	0.66	0.70	0.10	-0.04	Pass	600648	0	Pass
1633.94	1633.95	0.10	-0.01	Pass	0.64	0.70	0.10	-0.06	Pass	381678	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.05	112.99	0.10	0.06	Pass	0.66	0.70	0.10	-0.04	Pass	224687	0	Pass
302.04	302.00	0.10	0.04	Pass	0.64	0.70	0.10	-0.06	Pass	101350	0	Pass
602.04	601.98	0.10	0.06	Pass	0.64	0.70	0.10	-0.06	Pass	298956	0	Pass
1034.06	1033.99	0.10	0.07	Pass	0.64	0.70	0.10	-0.06	Pass	192475	0	Pass
1334.04	1333.97	0.10	0.07	Pass	0.63	0.70	0.10	-0.07	Pass	484411	0	Pass
1634.02	1633.95	0.10	0.07	Pass	0.61	0.70	0.10	-0.09	Pass	374382	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.30	0.02	Pass	1.16	1.20	0.60	-0.04	Pass	56851	0	Pass
301.90	302.00	0.30	-0.10	Pass	1.33	1.20	0.60	0.13	Pass	156453	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.34	1.20	0.60	0.14	Pass	885174	0	Pass
1033.91	1033.99	0.30	-0.08	Pass	1.26	1.20	0.60	0.06	Pass	891494	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.26	1.20	0.60	0.06	Pass	1684163	0	Pass
1633.89	1633.95	0.30	-0.06	Pass	1.19	1.20	0.60	-0.01	Pass	1531538	0	Pass

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.06	112.99	0.30	0.07	Pass	1.16	1.20	0.60	-0.04	Pass	297926	0	Pass
302.04	302.00	0.30	0.04	Pass	1.21	1.20	0.60	0.01	Pass	150562	0	Pass
601.98	601.98	0.30	0.00	Pass	1.21	1.20	0.60	0.01	Pass	472902	0	Pass
1034.00	1033.99	0.30	0.01	Pass	1.21	1.20	0.60	0.01	Pass	394762	0	Pass
1333.98	1333.97	0.30	0.01	Pass	1.21	1.20	0.60	0.01	Pass	953020	0	Pass
1634.01	1633.95	0.30	0.06	Pass	1.21	1.20	0.60	0.01	Pass	807889	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.50	-0.01	Pass	2.44	2.50	1.25	-0.06	Pass	66087	0	Pass
301.86	302.00	0.50	-0.14	Pass	2.66	2.50	1.25	0.16	Pass	203878	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.70	2.50	1.25	0.20	Pass	1040487	0	Pass
1033.90	1033.99	0.50	-0.09	Pass	2.59	2.50	1.25	0.09	Pass	1292677	0	Pass
1333.90	1333.97	0.50	-0.07	Pass	2.57	2.50	1.25	0.07	Pass	2600747	0	Pass
1633.91	1633.95	0.50	-0.04	Pass	2.46	2.50	1.25	-0.04	Pass	2696138	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.91	112.99	0.50	-0.08	Pass	2.54	2.50	1.25	0.04	Pass	367948	0	Pass
301.95	302.00	0.50	-0.05	Pass	2.57	2.50	1.25	0.07	Pass	211663	0	Pass
601.94	601.98	0.50	-0.04	Pass	2.55	2.50	1.25	0.05	Pass	765395	0	Pass
1034.05	1033.99	0.50	0.06	Pass	2.43	2.50	1.25	-0.07	Pass	824064	0	Pass
1334.00	1333.97	0.50	0.03	Pass	2.46	2.50	1.25	-0.04	Pass	2061186	0	Pass
1634.06	1633.95	0.50	0.11	Pass	2.44	2.50	1.25	-0.06	Pass	1965015	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1 Analy Batch No.: 15859

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 23:39 Calibration End Date: 05/08/2013 01:36 Calibration ID: 2763

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-15859/3	07MAY13-Perc-005.d
Level 2	STD02 320-15859/4	07MAY13-Perc-006.d
Level 3	STD03 320-15859/5	07MAY13-Perc-007.d
Level 4	STD04 320-15859/6	07MAY13-Perc-008.d
Level 5	STD05 320-15859/7	07MAY13-Perc-009.d
Level 6	STD06 320-15859/8	07MAY13-Perc-010.d
Level 7	STD07 320-15859/9	07MAY13-Perc-011.d
Level 8	STD08 320-15859/10	07MAY13-Perc-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.7871 0.7772	0.7629 0.7925	0.7332 0.8351	0.8013	0.7518	Ave		0.7801				4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI

LCMS INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1 Analy Batch No.: 15859

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 23:39 Calibration End Date: 05/08/2013 01:36 Calibration ID: 2763

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-15859/3	07MAY13-Perc-005.d
Level 2	STD02 320-15859/4	07MAY13-Perc-006.d
Level 3	STD03 320-15859/5	07MAY13-Perc-007.d
Level 4	STD04 320-15859/6	07MAY13-Perc-008.d
Level 5	STD05 320-15859/7	07MAY13-Perc-009.d
Level 6	STD06 320-15859/8	07MAY13-Perc-010.d
Level 7	STD07 320-15859/9	07MAY13-Perc-011.d
Level 8	STD08 320-15859/10	07MAY13-Perc-012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	1557687 49433056	2559379 93926830	3791494 147106249	8189519	20147097	0.150 5.00	0.300 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:

Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICV 320-15859/12 Calibration Date: 05/08/2013 02:09

Instrument ID: A5 Calib Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/08/2013 01:36

Lab File ID: 07MAY13-Perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7801	0.8128		5.21	5.00	4.2	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVL 320-15859/19 Calibration Date: 05/08/2013 04:06

Instrument ID: A5 Calib Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/08/2013 01:36

Lab File ID: 07MAY13-Perc-021.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7801	0.8192		0.525	0.500	5.0	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCV 320-15859/39 Calibration Date: 05/08/2013 09:40

Instrument ID: A5 Calib Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/08/2013 01:36

Lab File ID: 07MAY13-Perc-041.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7801	0.7865		5.04	5.00	0.8	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCV 320-15859/50 Calibration Date: 05/08/2013 12:44

Instrument ID: A5 Calib Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/08/2013 01:36

Lab File ID: 07MAY13-Perc-052.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7801	0.7485		1.92	2.00	-4.1	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCV 320-15859/61 Calibration Date: 05/08/2013 15:48

Instrument ID: A5 Calib Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/08/2013 01:36

Lab File ID: 07MAY13-Perc-063.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7801	0.7784		0.998	1.00	-0.2	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab Sample ID: CCVL 320-15859/67 Calibration Date: 05/08/2013 17:45

Instrument ID: A5 Calib Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/08/2013 01:36

Lab File ID: 07MAY13-Perc-070.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.7801	0.8244		0.528	0.500	5.7	50.0

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 07MAY13-Perc-048.d

Lab ID: INF 320-15484/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.99	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-15859/11

Matrix: Water Lab File ID: 07MAY13-Perc-013.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/08/2013 01:52

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-15859/18

Matrix: Water Lab File ID: 07MAY13-Perc-020.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/08/2013 03:49

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-15859/68

Matrix: Water Lab File ID: 07MAY13-Perc-071.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/08/2013 18:02

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-15859/2

Matrix: Water Lab File ID: 07MAY13-Perc-004.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/07/2013 23:22

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Lab File ID: 07MAY13-Perc-046.d Lab Sample ID: MB 320-15484/1-A

Matrix: Water Date Extracted: 05/02/2013 06:30

Instrument ID: A5 Date Analyzed: 05/08/2013 11:04

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-15484/2-A	07MAY13-Perc-047.d	05/08/2013 11:21
MRC-MW90B-042313	240-23592-2	07MAY13-Perc-059.d	05/08/2013 14:41
MRC-MW90B-042313 MS	240-23592-2 MS	07MAY13-Perc-060.d	05/08/2013 14:58
MRC-MW90B-042313 MSD	240-23592-2 MSD	07MAY13-Perc-061.d	05/08/2013 15:15
MRC-MW75A-042313	240-23592-4	07MAY13-Perc-062.d	05/08/2013 15:31

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-15484/1-A

Matrix: Water Lab File ID: 07MAY13-Perc-046.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 05/02/2013 06:30

Sample wt/vol: 4.00(mL) Date Analyzed: 05/08/2013 11:04

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 15859 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 07MAY13-Perc-047.d

Lab ID: LCS 320-15484/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	4.78	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 07MAY13-Perc-060.d

Lab ID: 240-23592-2 MS Client ID: MRC-MW90B-042313 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.48 J	5.73	105	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 07MAY13-Perc-061.d

Lab ID: 240-23592-2 MSD Client ID: MRC-MW90B-042313 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	5.68	104	1	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 05/07/2013 23:39

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 05/08/2013 01:36

Calibration ID: 2763

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		114733740	9.88				
UPPER LIMIT		172100610	10.88				
LOWER LIMIT		57366870	8.88				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-15859/11		110957051	9.87				
ICV 320-15859/12		97695624	9.87				
CCB 320-15859/18		107407024	9.87				
CCVL 320-15859/19		103872273	9.87				
CCV 320-15859/39		126659112	9.87				
MB 320-15484/1-A		128300674	9.89				
LCS 320-15484/2-A		133290325	9.89				
INF 320-15484/3-A		129634900	9.85				
CCV 320-15859/50		141937185	9.89				
240-23592-2	MRC-MW90B-042313	127688514	9.87				
240-23592-2 MS	MRC-MW90B-042313 MS	97094292	9.87				
240-23592-2 MSD	MRC-MW90B-042313 MSD	118557778	9.89				
240-23592-4	MRC-MW75A-042313	125841850	9.87				
CCV 320-15859/61		122246092	9.91				
CCVL 320-15859/67		138239413	9.90				
CCB 320-15859/68		103200241	9.90				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23592-1

SDG No.:

Batch Number: 15484 Batch Start Date: 05/02/13 06:30 Batch Analyst: Phan, Tuan

Batch Method: Filtration Batch End Date: 05/02/13 09:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00021	LC6850SP 00010		
MB 320-15484/1		Filtration, 6850		4.00 mL	4.00 mL	40 uL			
LCS 320-15484/2		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
INF 320-15484/3		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
240-23592-D-2	MRC-MW90B-042313	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
240-23592-D-2 MS	MRC-MW90B-042313	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		
240-23592-D-2 MSD	MRC-MW90B-042313	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		
240-23592-A-4	MRC-MW75A-042313	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			

Batch Notes	
BA/AG/H Cartridge Lot#	DIONEX 130206
Batch Comment	SPIKE. TP WITNESS. GB
Filter #2 Lot #	0.20 MILLEX R2AA50532
Filter Lot #	0.45 uM MILLIPORE R2AA68913
SMCS Lot #	4515-019B
Reagent Water Lot #	4/26/13

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE ID MRC-MW90B-042313

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST / IS AMOUNT (NG)	AVE RRF	CONCENTRATION PPB
127688514	1	4773315 / 10	0.7801	0.48

Perchlorate = 0.48 ug/L

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\Sacchrom\ChromData\A5\20130507-4331.b\07MAY13-Perc-059.d		
Lims ID:	240-23592-D-2-A	Client ID:	MRC-MW90B-042313
Inject. Date:	08-May-2013 14:41:39	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:			
Misc. Info.:			
Operator:		Instrument ID:	A5
Injection Vol:	100.0 ul	ALS Bottle#:	0
Lims Batch ID:	15859	Lims Sample ID:	57
Detector:	MS QQQ		
Method:	\\Sacchrom\ChromData\A5\20130507-4331.b\6850_A5.m		
Last Update:	09-May-2013 08:50:09	Calib Date:	08-May-2013 01:36:14
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Sacchrom\ChromData\A5\20130507-4331.b\07MAY13-Perc-012.d		
Limit Group:	LC 6850 ICAL		
Integrator:	Picker		
Column Type:		Column Dia:	
Process Host:	XAWRK005		

First Level Reviewer: shafern Date: 09-May-2013 08:51:17

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	S/N	Flags
* 1 18-O Perchlorate									
107.0 > 89.0	9.874	9.880	-0.006		127688514	10.0		1225	
109.0 > 91.0	9.884	9.880	0.004		41037142		3.11(2.30-3.80)	1770	
2 Perchlorate									
99.0 > 83.0	9.908	9.891	0.017	1.003	4773315	0.4795		148	
101.0 > 85.0	9.863	9.891	-0.028	0.999	1515945		3.15(2.30-3.80)	125	

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23592-1

SDG No.:

Project: MRC GW Sampling

Client Sample ID	Lab Sample ID
MRC-MW75A-042313	240-23592-4
MRC-MW-59A-042313	240-23592-6
MRC-MW-22B-042313	240-23592-7
MRC-MW-57A-042313	240-23592-8

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-101391/7 04/30/2013 12:36				CCV 440-101391/22 04/30/2013 13:30				CCV 440-101391/29 04/30/2013 13:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	24.2		25.0	97	49.2		50.0	98	47.4		50.0	95
Arsenic	25.4		25.0	101	49.5		50.0	99	49.8		50.0	100
Barium	25.2		25.0	101	49.8		50.0	100	49.8		50.0	100
Beryllium	24.7		25.0	99	50.0		50.0	100	49.3		50.0	99
Cadmium	24.9		25.0	100	49.5		50.0	99	49.1		50.0	98
Chromium	24.7		25.0	99	50.5		50.0	101	50.8		50.0	102
Cobalt	25.2		25.0	101	50.4		50.0	101	50.8		50.0	102
Copper	25.7		25.0	103	48.9		50.0	98	49.2		50.0	98
Lead	24.4		25.0	98	47.8		50.0	96	49.4		50.0	99
Molybdenum	25.4		25.0	102	50.8		50.0	102	48.6		50.0	97
Nickel	25.5		25.0	102	48.8		50.0	98	49.0		50.0	98
Selenium	25.4		25.0	102	49.5		50.0	99	50.3		50.0	101
Silver	23.4		25.0	94	52.0		50.0	104	50.2		50.0	100
Thallium	23.6		25.0	94	49.5		50.0	99	50.4		50.0	101
Vanadium	26.0		25.0	104	50.4		50.0	101	50.7		50.0	101
Zinc	25.3		25.0	101	50.0		50.0	100	49.7		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

ICV Source: MEICPMS4 ICV_00208 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00208

Analyte	ICV 440-103335/6 04/30/2013 12:36				CCV 440-103335/23 04/30/2013 17:30				CCV 440-103335/31 04/30/2013 17:51			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	24.2		25.0	97	47.1		50.0	94	46.4		50.0	93
Arsenic	25.4		25.0	101	47.8		50.0	96	47.7		50.0	95
Barium	25.2		25.0	101	47.7		50.0	95	48.3		50.0	97
Beryllium	24.7		25.0	99	51.3		50.0	103	52.0		50.0	104
Cadmium	24.9		25.0	100	47.5		50.0	95	47.3		50.0	95
Chromium	24.7		25.0	99	47.7		50.0	95	47.9		50.0	96
Cobalt	25.2		25.0	101	47.7		50.0	95	48.8		50.0	98
Copper	25.7		25.0	103	46.4		50.0	93	46.8		50.0	94
Lead	24.4		25.0	98	46.9		50.0	94	48.0		50.0	96
Molybdenum	25.4		25.0	102	45.8		50.0	92	45.3		50.0	91
Nickel	25.5		25.0	102	45.8		50.0	92	45.9		50.0	92
Selenium	25.4		25.0	102	49.3		50.0	99	49.0		50.0	98
Silver	23.4		25.0	94	48.6		50.0	97	48.8		50.0	98
Thallium	23.6		25.0	94	49.7		50.0	99	50.1		50.0	100
Vanadium	26.0		25.0	104	47.7		50.0	95	48.3		50.0	97
Zinc	25.3		25.0	101	50.6		50.0	101	49.6		50.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	ICV 440-101574/1-A 05/01/2013 12:55				CCV 440-101574/3-A 05/01/2013 14:43				CCV 440-101574/3-A 05/01/2013 15:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	7.64		8.00	96	4.34		4.00	109	4.34		4.00	109

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

ICV Source: ME 1PPM HG2_00077 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00079

Analyte	CCV 440-101574/3-A 05/01/2013 15:47				CCV 440-101574/3-A 05/01/2013 16:12							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.41		4.00	110	4.42		4.00	110				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-101391/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.01	J	101	50-150
Arsenic	1.00	0.947	J	95	50-150
Beryllium	0.500	0.510		102	50-150
Cadmium	0.500	0.524	J	105	50-150
Barium	1.00	1.07		107	50-150
Chromium	1.00	0.974	J	97	50-150
Copper	1.00	1.17	J	117	50-150
Nickel	1.00	1.15	J	115	50-150
Lead	1.00	1.02		102	50-150
Selenium	1.00	0.810	J	81	50-150
Cobalt	0.500	0.517	J	103	50-150
Silver	1.00	0.853	J	85	50-150
Thallium	1.00	0.970	J	97	50-150
Zinc	5.00	12.1	J	242	50-150
Molybdenum	1.00	1.08	J	108	50-150
Vanadium	2.00	2.14		107	50-150

Not used

Lab Sample ID: CRI 440-103335/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.01	J	101	50-150
Arsenic	1.00	0.947	J	95	50-150
Beryllium	0.500	0.510		102	50-150
Cadmium	0.500	0.524	J	105	50-150
Barium	1.00	1.07		107	50-150
Chromium	1.00	0.974	J	97	50-150
Copper	1.00	1.17	J	117	50-150
Nickel	1.00	1.15	J	115	50-150
Lead	1.00	1.02		102	50-150
Selenium	1.00	0.810	J	81	50-150
Cobalt	0.500	0.517	J	103	50-150
Silver	1.00	0.853	J	85	50-150
Thallium	1.00	0.970	J	97	50-150
Zinc	5.00	12.1	J	242	50-150

Not used

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-103335/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00018

Analyte Not used	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	1.00	1.08	J	108	50-150
Vanadium	2.00	2.14		107	50-150

Lab Sample ID: CRI 440-101391/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.98	J	99	50-150
Arsenic	2.00	2.09		105	50-150
Beryllium	1.00	1.02		102	50-150
Cadmium	1.00	1.08		108	50-150
Barium	2.00	2.12		106	50-150
Chromium	2.00	2.18		109	50-150
Copper	2.00	2.25		112	50-150
Nickel	2.00	2.51		125	50-150
Lead	2.00	2.03		101	50-150
Selenium	2.00	2.06		103	50-150
Cobalt	1.00	1.04		104	50-150
Silver	2.00	2.02		101	50-150
Thallium	2.00	1.94		97	50-150
Zinc	10.0	12.4	J	124	50-150
Molybdenum	2.00	2.16		108	50-150
Vanadium	4.00	4.28		107	50-150

Lab Sample ID: CRI 440-103335/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.98	J	99	50-150
Arsenic	2.00	2.09		105	50-150
Beryllium	1.00	1.02		102	50-150
Cadmium	1.00	1.08		108	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Method: 6020 Instrument ID: ICPMS4

Lab Sample ID: CRI 440-103335/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	2.00	2.12		106	50-150
Chromium	2.00	2.18		109	50-150
Copper	2.00	2.25		112	50-150
Nickel	2.00	2.51		125	50-150
Lead	2.00	2.03		101	50-150
Selenium	2.00	2.06		103	50-150
Cobalt	1.00	1.04		104	50-150
Silver	2.00	2.02		101	50-150
Thallium	2.00	1.94		97	50-150
Zinc	10.0	12.4	J	124	50-150
Molybdenum	2.00	2.16		108	50-150
Vanadium	4.00	4.28		107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-101574/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.245		122	50-150

Lab Sample ID: CRA 440-101574/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00079

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.265		132	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101391/8 04/30/2013 12:41		CCB 440-101391/23 04/30/2013 13:36		CCB 440-101391/30 04/30/2013 13:55			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	0.236	J	2.0	U	0.298	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	1.0	U	0.165	J		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-103335/7 04/30/2013 12:41		CCB 440-103335/24 04/30/2013 17:32		CCB 440-103335/32 04/30/2013 17:54			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	1.0	1.0	U	1.0	U	1.0	U		
Barium	1.0	1.0	U	1.0	U	1.0	U		
Beryllium	0.50	0.50	U	0.50	U	0.50	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	2.0	0.236	J	0.360	J	0.419	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	2.0	2.0	U	2.0	U	2.0	U		
Silver	1.0	1.0	U	0.143	J	0.167	J		
Thallium	1.0	1.0	U	1.0	U	1.0	U		
Vanadium	2.0	2.0	U	2.0	U	2.0	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-101574/2-A 05/01/2013 12:57		CCB 440-101574/4-A 05/01/2013 14:46		CCB 440-101574/4-A 05/01/2013 15:24		CCB 440-101574/4-A 05/01/2013 15:49	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.100	J	0.110	J	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 440-101574/4-A 05/01/2013 16:14							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-100766/1-A

Instrument Code: ICPMS4 Batch No.: 101391

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	0.503	J		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	1.43	J		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-101603/1-A

Instrument Code: CV-HG3 Batch No.: 101713

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICSA 440-101391/11 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.307**	
Arsenic		**-0.0200**	
Barium		**0.254**	
Beryllium		**0.0060**	
Cadmium		**0.0780**	
Chromium		**1.31**	
Cobalt		**0.0830**	
Copper		**1.46**	
Lead		**0.134**	
Molybdenum	**2000**	**2304**	**115**
Nickel		**1.32**	
Selenium		**-0.268**	
Silver		**0.0640**	
Thallium		**0.0130**	
Vanadium		**0.266**	
Zinc		**5.32**	
Aluminum	*100000*	*95708*	*96*
Calcium	*100000*	*102253*	*102*
Cerium		*0.0370*	
Iron	*100000*	*104545*	*105*
Magnesium	*100000*	*101906*	*102*
Manganese		*4.52*	
Potassium	*100000*	*104914*	*105*
Sodium	*100000*	*103769*	*104*
Sr		*4.98*	
Tin		*0.283*	
Uranium		*0.0120*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICSA 440-103335/10 Instrument ID: ICPMS4

Lab File ID: 011ICSA.D ICS Source: MEICPMS4 ICSA_00204

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.307**	
Arsenic		**-0.0200**	
Barium		**0.254**	
Beryllium		**0.0060**	
Cadmium		**0.0780**	
Chromium		**1.31**	
Cobalt		**0.0830**	
Copper		**1.46**	
Lead		**0.134**	
Molybdenum	**2000**	**2304**	**115**
Nickel		**1.32**	
Selenium		**-0.268**	
Silver		**0.0640**	
Thallium		**0.0130**	
Vanadium		**0.266**	
Zinc		**5.32**	
Aluminum	*100000*	*95708*	*96*
Calcium	*100000*	*102253*	*102*
Cerium		*0.0370*	
Iron	*100000*	*104545*	*105*
Magnesium	*100000*	*101906*	*102*
Manganese		*4.52*	
Potassium	*100000*	*104914*	*105*
Sodium	*100000*	*103769*	*104*
Sr		*4.98*	
Tin		*0.283*	
Uranium		*0.0120*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICSAB 440-101391/14 Instrument ID: ICPMS4

Lab File ID: 014ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**21.0**	**105**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.1**	**110**
Beryllium	**20.0**	**21.5**	**107**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.6**	**103**
Cobalt	**20.0**	**19.4**	**97**
Copper	**20.0**	**20.5**	**103**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2169**	**107**
Nickel	**20.0**	**20.3**	**101**
Selenium	**20.0**	**20.4**	**102**
Silver	**20.0**	**19.7**	**98**
Thallium	**20.0**	**18.4**	**92**
Vanadium	**20.0**	**19.7**	**99**
Zinc	**20.0**	**29.9**	**149**
Aluminum	*100000*	*86214*	*86*
Calcium	*101000*	*95832*	*95*
Cerium	*20.0*	*22.1*	*111*
Iron	*100000*	*97358*	*97*
Magnesium	*101000*	*92164*	*92*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*96198*	*96*
Sodium	*101000*	*94298*	*94*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*21.0*	*105*
Uranium	*20.0*	*20.2*	*101*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Lab Sample ID: ICSAB 440-103335/12 Instrument ID: ICPMS4

Lab File ID: 014ICSB.D ICS Source: MEICPMS4 ICSB_00204

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Antimony	**20.0**	**21.0**	**105**
Arsenic	**20.0**	**20.9**	**104**
Barium	**20.0**	**22.1**	**110**
Beryllium	**20.0**	**21.5**	**107**
Cadmium	**20.0**	**20.5**	**103**
Chromium	**20.0**	**20.6**	**103**
Cobalt	**20.0**	**19.4**	**97**
Copper	**20.0**	**20.5**	**103**
Lead	**20.0**	**19.0**	**95**
Molybdenum	**2020**	**2169**	**107**
Nickel	**20.0**	**20.3**	**101**
Selenium	**20.0**	**20.4**	**102**
Silver	**20.0**	**19.7**	**98**
Thallium	**20.0**	**18.4**	**92**
Vanadium	**20.0**	**19.7**	**99**
Zinc	**20.0**	**29.9**	**149**
Aluminum	*100000*	*86214*	*86*
Calcium	*101000*	*95832*	*95*
Cerium	*20.0*	*22.1*	*111*
Iron	*100000*	*97358*	*97*
Magnesium	*101000*	*92164*	*92*
Manganese	*20.0*	*20.2*	*101*
Potassium	*101000*	*96198*	*96*
Sodium	*101000*	*94298*	*94*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*21.0*	*105*
Uranium	*20.0*	*20.2*	*101*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MRC-MW-59A-042313 MS
Lab ID: 240-23592-6 MS
Lab Name: TestAmerica Irvine
Job No.: 240-23592-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	6.15		0.20	U	8.00	77	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-59A-042313 MS
Lab ID: 240-23592-6 MS
Lab Name: TestAmerica Irvine
Job No.: 240-23592-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	84.3		2.0	U	80.0	105	75-125		6020
Arsenic	81.7		1.5	J	80.0	100	75-125		6020
Beryllium	96.2		8.2		80.0	110	75-125		6020
Cadmium	77.0		0.33	J	80.0	96	75-125		6020
Barium	251		150		80.0	125	75-125		6020
Chromium	76.7		2.0	U	80.0	96	75-125		6020
Copper	77.5		4.5		80.0	91	75-125		6020
Nickel	639		560		80.0	97	75-125	4	6020
Lead	73.9		1.0	U	80.0	92	75-125		6020
Selenium	78.6		0.62	J	80.0	97	75-125		6020
Cobalt	876		810		80.0	86	75-125	4	6020
Silver	83.5		1.0	U	80.0	104	75-125		6020
Thallium	75.5		2.0	U	80.0	94	75-125		6020
Zinc	1230		1200		80.0	88	75-125	4	6020
Molybdenum	80.1		0.28	J	80.0	100	75-125		6020
Vanadium	78.7		20	U	80.0	98	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-59A-042313 MSD Lab ID: 240-23592-6 MSD

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	86.3		80.0	108	75-125	2	20		6020
Arsenic	82.3		80.0	101	75-125	1	20		6020
Beryllium	97.8		80.0	112	75-125	2	20		6020
Cadmium	77.9		80.0	97	75-125	1	20		6020
Barium	257		80.0	134	75-125	3	20	F	6020
Chromium	76.7		80.0	96	75-125	0	20		6020
Copper	76.9		80.0	90	75-125	1	20		6020
Nickel	641		80.0	99	75-125	0	20	4	6020
Lead	73.5		80.0	92	75-125	1	20		6020
Selenium	78.0		80.0	97	75-125	1	20		6020
Cobalt	896		80.0	110	75-125	2	20	4	6020
Silver	83.0		80.0	104	75-125	1	20		6020
Thallium	76.7		80.0	96	75-125	2	20		6020
Zinc	1240		80.0	106	75-125	1	20	4	6020
Molybdenum	81.2		80.0	101	75-125	1	20		6020
Vanadium	80.2		80.0	100	75-125	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23530-A-3-A MS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	81.3		0.43	J	80.0	101	75-125		6020
Arsenic	83.2		5.0	U	80.0	104	75-125		6020
Beryllium	86.3		4.1		80.0	103	75-125		6020
Cadmium	77.8		1.8		80.0	95	75-125		6020
Barium	600		520		80.0	97	75-125	4	6020
Chromium	76.6		2.0	U	80.0	96	75-125		6020
Copper	73.1		8.9		80.0	80	75-125		6020
Nickel	388		320		80.0	87	75-125		6020
Lead	72.0		1.3		80.0	88	75-125		6020
Selenium	72.7		5.0	U	80.0	91	75-125		6020
Cobalt	751		690		80.0	82	75-125	4	6020
Silver	82.3		0.23	J	80.0	103	75-125		6020
Thallium	72.9		0.20	J	80.0	91	75-125		6020
Zinc	445		370		80.0	95	75-125	4	6020
Molybdenum	85.6		1.1	J	80.0	106	75-125		6020
Vanadium	80.2		0.90	J	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23530-A-3-B MSD

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	82.7	80.0	103	75-125	2	20		6020
Arsenic	82.3	80.0	103	75-125	1	20		6020
Beryllium	88.7	80.0	106	75-125	3	20		6020
Cadmium	78.7	80.0	96	75-125	1	20		6020
Barium	597	80.0	93	75-125	1	20	4	6020
Chromium	76.6	80.0	96	75-125	0	20		6020
Copper	72.9	80.0	80	75-125	0	20		6020
Nickel	383	80.0	80	75-125	1	20		6020
Lead	71.2	80.0	87	75-125	1	20		6020
Selenium	71.9	80.0	90	75-125	1	20		6020
Cobalt	746	80.0	76	75-125	1	20	4	6020
Silver	82.7	80.0	103	75-125	0	20		6020
Thallium	72.5	80.0	91	75-125	1	20		6020
Zinc	443	80.0	94	75-125	0	20	4	6020
Molybdenum	87.6	80.0	108	75-125	2	20		6020
Vanadium	80.4	80.0	99	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-44777-E-2-E MS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.38		0.20	U	8.00	105	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-44777-E-2-F MSD

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.33	8.00	104	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-59A-042313 PDS Lab ID: 240-23592-6 PDS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	83.1		2.0	U	80.0	104	75-125		6020
Arsenic	79.5		1.5	J	80.0	98	75-125		6020
Beryllium	95.1		8.2		80.0	109	75-125		6020
Cadmium	74.8		0.33	J	80.0	93	75-125		6020
Barium	246		150		80.0	119	75-125		6020
Chromium	74.1		2.0	U	80.0	93	75-125		6020
Copper	74.9		4.5		80.0	88	75-125		6020
Nickel	632		560		80.0	88	75-125		6020
Lead	73.2		1.0	U	80.0	91	75-125		6020
Selenium	77.2		0.62	J	80.0	96	75-125		6020
Cobalt	871		810		80.0	NC	75-125		6020
Silver	80.3		1.0	U	80.0	100	75-125		6020
Thallium	75.4		2.0	U	80.0	94	75-125		6020
Zinc	1220		1200		80.0	NC	75-125		6020
Molybdenum	78.3		0.28	J	80.0	98	75-125		6020
Vanadium	77.6		20	U	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23530-C-3-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	82.5		0.43	J	80.0	103	75-125		6020
Arsenic	80.8		5.0	U	80.0	101	75-125		6020
Beryllium	87.4		4.1		80.0	104	75-125		6020
Cadmium	77.8		1.8		80.0	95	75-125		6020
Barium	594		520		80.0	89	75-125		6020
Chromium	74.9		2.0	U	80.0	94	75-125		6020
Copper	71.1		8.9		80.0	78	75-125		6020
Nickel	378		320		80.0	74	75-125	W	6020
Lead	70.3		1.3		80.0	86	75-125		6020
Selenium	69.6		5.0	U	80.0	87	75-125		6020
Cobalt	735		690		80.0	62	75-125	W	6020
Silver	81.6		0.23	J	80.0	102	75-125		6020
Thallium	72.2		0.20	J	80.0	90	75-125		6020
Zinc	439		370		80.0	89	75-125		6020
Molybdenum	87.0		1.1	J	80.0	107	75-125		6020
Vanadium	78.6		0.90	J	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS

Client ID: MRC-MW-59A-042313 DU Lab ID: 240-23592-6 DU

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-100766/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00016

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	81.8		102	80	120		6020
Arsenic	80.0	83.7		105	80	120		6020
Beryllium	80.0	84.3		105	80	120		6020
Cadmium	80.0	80.9		101	80	120		6020
Barium	80.0	81.1		101	80	120		6020
Chromium	80.0	82.6		103	80	120		6020
Copper	80.0	83.9		105	80	120		6020
Nickel	80.0	82.9		104	80	120		6020
Lead	80.0	80.8		101	80	120		6020
Selenium	80.0	85.3		107	80	120		6020
Cobalt	80.0	84.0		105	80	120		6020
Silver	80.0	87.0		109	80	120		6020
Thallium	80.0	82.0		102	80	120		6020
Zinc	80.0	82.2		103	80	120		6020
Molybdenum	80.0	78.7		98	80	120		6020
Vanadium	80.0	81.9		102	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-101603/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00079

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.46		106	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23592-8

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23592-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	2.0	U	10	U	NC		6020
Arsenic	2.2	J	25	U	NC		6020
Beryllium	0.41	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	120		117		1.9		6020
Chromium	1.0	J	10	U	NC		6020
Copper	1.7	J	10	U	NC		6020
Nickel	440		443		0.67		6020
Lead	0.65	J	5.0	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	580		599		4.2		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	110		119		NC		6020
Molybdenum	1.0	J	1.18	J	NC		6020
Vanadium	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23592-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23592-1

SDG Number:

Matrix: Water Instrument ID: ICPMS4

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23592-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23592-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

FORM IX - IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23592-1

SDG No.:

Instrument ID: ICPMS4 Date: 05/10/2012 14:51

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		4000	6020
Nickel		4000	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		3500	6020
Silver		100	6020
Thallium		4000	6020
Zinc		3000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-100766/1-A	04/26/2013 14:32	100766		50	50
LCS 440-100766/2-A	04/26/2013 14:32	100766		50	50
240-23530-A-3-A MS	04/26/2013 14:32	100766		50	50
240-23530-A-3-B MSD	04/26/2013 14:32	100766		50	50
240-23592-6	04/26/2013 14:32	100766		50	50
240-23592-6 MS	04/26/2013 14:32	100766		50	50
240-23592-6 MSD	04/26/2013 14:32	100766		50	50
240-23592-4	04/26/2013 14:32	100766		50	50
240-23592-7	04/26/2013 14:32	100766		50	50
240-23592-8	04/26/2013 14:32	100766		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-101603/1-A	05/01/2013 11:50	101603		20	20
LCS 440-101603/2-A	05/01/2013 11:50	101603		20	20
440-44777-E-2-E MS	05/01/2013 11:50	101603		20	20
440-44777-E-2-F MSD	05/01/2013 11:50	101603		20	20
240-23592-4	05/01/2013 11:50	101603		20	20
240-23592-6	05/01/2013 11:50	101603		20	20
240-23592-6 DU	05/01/2013 11:50	101603		20	20
240-23592-6 MS	05/01/2013 11:50	101603		20	20
240-23592-7	05/01/2013 11:50	101603		20	20
240-23592-8	05/01/2013 11:50	101603		20	20

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/30/2013 12:19 End Date: 04/30/2013 13:55

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn								
RINSE 440-101391/1			12:19																								
STD0 440-101391/2 IC	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD1 440-101391/3 IC	1		12:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD2 440-101391/4 IC	1		12:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD3 440-101391/5 IC	1		12:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD4 440-101391/6 IC	1		12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICV 440-101391/7	1		12:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICB 440-101391/8	1		12:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 440-101391/9	1		12:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 440-101391/10	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSA 440-101391/11	1		12:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			12:53																								
RINSE 440-101391/13			12:57																								
ICSAB 440-101391/14	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
RINSE 440-101391/15			13:03																								
MB 440-100766/1-A	1	R	13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
LCS 440-100766/2-A	1	R	13:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			13:17																								
240-23530-A-3-A MS	1	R	13:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23530-A-3-B MSD	1	R	13:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23530-C-3-A PDS	1	R	13:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 440-101391/22	1		13:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-101391/23	1		13:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			13:38																								
ZZZZZZ			13:41																								
ZZZZZZ			13:44																								
240-23592-8	1	R	13:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23592-8 SD	5	R	13:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 440-101391/29	1		13:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-101391/30	1		13:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Instrument ID: ICPMS4 Analysis Method: 6020

Start Date: 04/30/2013 12:22 End Date: 04/30/2013 17:54

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn										
STD0 440-103335/1 IC	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD1 440-103335/2 IC	1		12:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD2 440-103335/3 IC	1		12:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD3 440-103335/4 IC	1		12:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
STD4 440-103335/5 IC	1		12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICV 440-103335/6	1		12:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICB 440-103335/7	1		12:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CRI 440-103335/8	1		12:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CRI 440-103335/9	1		12:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
ICSA 440-103335/10	1		12:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 440-103335/11			12:57																										
ICSAB 440-103335/12	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
RINSE 440-103335/13			13:03																										
CCV 440-103335/14			16:53																										
CCB 440-103335/15			16:55																										
ZZZZZZ			17:10																										
ZZZZZZ			17:13																										
ZZZZZZ			17:16																										
ZZZZZZ			17:18																										
ZZZZZZ			17:21																										
ZZZZZZ			17:24																										
ZZZZZZ			17:27																										
CCV 440-103335/23	1		17:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 440-103335/24	1		17:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23592-6	1	R	17:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23592-6 MS	1	R	17:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23592-6 MSD	1	R	17:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23592-6 PDS	1	R	17:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23592-4	1	R	17:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
240-23592-7	1	R	17:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCV 440-103335/31	1		17:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
CCB 440-103335/32	1		17:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 05/01/2013 12:40 End Date: 05/01/2013 16:17

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-101574/6-A	1		12:40	X
IC 440-101574/7-A	1		12:42	X
IC 440-101574/8-A	1		12:45	X
IC 440-101574/9-A	1		12:47	X
IC 440-101574/10-A	1		12:50	X
IC 440-101574/11-A	1		12:52	X
ICV 440-101574/1-A	1		12:55	X
ICB 440-101574/2-A	1		12:57	X
CRA 440-101574/5-A	1		13:00	X
CCV 440-101574/3-A	1		14:43	X
CCB 440-101574/4-A	1		14:46	X
MB 440-101603/1-A	1	T	14:57	X
LCS 440-101603/2-A	1	T	15:01	X
ZZZZZZ			15:04	
440-44777-E-2-E MS	1	T	15:06	X
440-44777-E-2-F MSD	1	T	15:09	X
ZZZZZZ			15:11	
ZZZZZZ			15:14	
ZZZZZZ			15:16	
ZZZZZZ			15:19	
CCV 440-101574/3-A	1		15:22	X
CCB 440-101574/4-A	1		15:24	X
ZZZZZZ			15:27	
ZZZZZZ			15:29	
ZZZZZZ			15:32	
ZZZZZZ			15:34	
240-23592-4	1	T	15:37	X
240-23592-6	1	T	15:39	X
240-23592-6 DU	1	T	15:42	X
240-23592-6 MS	1	T	15:44	X
CCV 440-101574/3-A	1		15:47	X
CCB 440-101574/4-A	1		15:49	X
240-23592-7	1	T	15:52	X
240-23592-8	1	T	15:54	X
ZZZZZZ			15:57	
ZZZZZZ			15:59	
ZZZZZZ			16:02	
ZZZZZZ			16:04	
ZZZZZZ			16:07	
ZZZZZZ			16:09	
CCV 440-101574/3-A	1		16:12	X
CCB 440-101574/4-A	1		16:14	X

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 05/01/2013 12:40 End Date: 05/01/2013 16:17

Lab Sample Id	D/F	Type	Time	Analytes																										
				Hg																										
CRA 440-101574/5-A	1		16:17	X																										

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/30/2013 End Date: 04/30/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-101391/2	12:22	100		100		100		100		100	
STD1 440-101391/3	12:25	101		100		100		101		99	
STD2 440-101391/4	12:28	101		100		100		100		98	
STD3 440-101391/5	12:31	101		100		101		100		99	
STD4 440-101391/6	12:33	100		99		99		98		98	
ICV 440-101391/7	12:36	102		99		100		100		99	
ICB 440-101391/8	12:41	100		97		98		100		99	
CRI 440-101391/9	12:44	103		101		100		101		99	
CRI 440-101391/10	12:47	104		100		100		100		100	
ICSA 440-101391/11	12:50	83		91		91		89		95	
ICSAB 440-101391/14	13:00	76		89		90		89		96	
MB 440-100766/1-A	13:06	85		91		92		98		101	
LCS 440-100766/2-A	13:15	83		90		93		99		101	
240-23530-A-3-A MS	13:20	82		103		94		89		86	
240-23530-A-3-B MSD	13:23	81		104		95		88		85	
240-23530-C-3-A PDS	13:25	80		105		95		87		85	
CCV 440-101391/22	13:30	98		110		108		104		101	
CCB 440-101391/23	13:36	95		102		101		102		101	
240-23592-8	13:47	77		99		95		92		95	
240-23592-8 SD	13:49	85		101		100		100		100	
CCV 440-101391/29	13:52	88		98		98		101		100	
CCB 440-101391/30	13:55	89		97		97		101		101	

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Irvine Job No.: 240-23592-1

SDG No.:

ICP-MS Instrument ID: ICPMS4 Start Date: 04/30/2013 End Date: 04/30/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element In-115	Q	Element Tb-159	Q
STD0 440-103335/1	12:22	100		100		100		100		100	
STD1 440-103335/2	12:25	101		100		100		101		99	
STD2 440-103335/3	12:28	101		100		100		100		98	
STD3 440-103335/4	12:31	101		100		101		100		99	
STD4 440-103335/5	12:33	100		99		99		98		98	
ICV 440-103335/6	12:36	102		99		100		100		99	
ICB 440-103335/7	12:41	100		97		98		100		99	
CRI 440-103335/8	12:44	103		101		100		101		99	
CRI 440-103335/9	12:47	104		100		100		100		100	
ICSA 440-103335/10	12:50	83		91		91		89		95	
ICSAB 440-103335/12	13:00	76		89		90		89		96	
CCV 440-103335/23	17:30	74		100		101		105		105	
CCB 440-103335/24	17:32	72		97		98		103		104	
240-23592-6	17:35	63		95		94		96		101	
240-23592-6 MS	17:38	63		95		95		96		100	
240-23592-6 MSD	17:41	62		95		94		95		100	
240-23592-6 PDS	17:43	62		95		95		96		98	
240-23592-4	17:46	65		95		92		93		98	
240-23592-7	17:48	73		97		98		103		103	
CCV 440-103335/31	17:51	69		96		97		102		105	
CCB 440-103335/32	17:54	68		91		94		102		104	

Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 440-100766 Analyst: Duong, Nghia Batch Open: 4/26/2013 2:32:57PM

Method Code: 440-3005A-440 Batch End: 4/26/2013 7:02:00PM

Preparation, Total Recoverable or Dissolved Metals

	Input Sample Lab ID (Analytical Method)	SDG	Matrix	Initial Amount	Final Amount	Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
1	MB~440-100766/1 N/A	N/A		50 mL	50 mL	N/A	N/A	N/A		
2	LCS~440-100766/2 N/A	N/A		50 mL	50 mL	N/A	N/A	N/A		
3	240-23530-C-3 (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
4	240-23530-A-3~MS (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
5	240-23530-A-3~MSD (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
6	240-23530-K-2 (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
7	240-23530-D-4 (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
8	240-23530-K-5 (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
9	240-23530-D-6 (6020)	N/A	Water	50 mL	50 mL	5/10/13	13_Days - R	4		
10	240-23384-G-1 (6020)	N/A	Water	50 mL	50 mL	5/8/13	13_Days - R	4		
11	240-23384-A-2 (6020)	N/A	Water	50 mL	50 mL	5/8/13	13_Days - R	4		
12	240-23384-A-3 (6020)	N/A	Water	50 mL	50 mL	5/8/13	13_Days - R	4		
13	440-44175-G-1 (6020)	N/A	Water	50 mL	50 mL	4/30/13	8_Days - R	2		
14	440-44554-D-1 (6020)	N/A	Water	50 mL	50 mL	4/30/13	4_Days - R	2		

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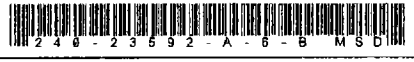
Metals/Inorganics Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 440-100766 Analyst: Duong, Nghia Batch Open: 4/26/2013 2:32:57PM

Method Code: 440-3005A-440 Batch End: 4/26/2013 7:02:00PM

15	440-44554-D-2 (6020)	N/A	Water	50 mL	50 mL	4/30/13	4_Days - R	2	
16	240-23592-C-6 (6020)	N/A	Water	50 mL	50 mL	5/13/13	13_Days - R	4	
17	240-23592-A-6~MS (6020)	N/A	Water	50 mL	50 mL	5/13/13	13_Days - R	4	
18	240-23592-A-6~MSD (6020)	N/A	Water	50 mL	50 mL	5/13/13	13_Days - R	4	
19	240-23592-B-4 (6020)	N/A	Water	50 mL	50 mL	5/13/13	13_Days - R	4	
20	240-23592-D-7 (6020)	N/A	Water	50 mL	50 mL	5/13/13	13_Days - R	4	
21	240-23592-D-8 (6020)	N/A	Water	50 mL	50 mL	5/13/13	13_Days - R	4	

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METALS PREPARATION REVIEW CHECKLIST
ICP, ICPMS, CVAA

Method: 200.2, 3005A, 3005A MOD, 3010A, 3050B, 3051A, 245.1, 7470A, 7471A

Preparation Date: 4/26/13 Technician Initials: ND Prep Batch: 100766

Review Date: 4/26/13 2nd Level Reviewer: GH

Item to Review	Tech	2nd Level	Notes/Specific Criteria
Method and Matrix			
Batched with correct preparation method	✓	✓	
In and Out temperature entered	✓	✓	
Digestion temperature within range. Non-Hg: 90-95°C for water, 90-100°C for soil on hot block, 40°C for soil in microwave Hg (soil and water): 95±3°C	✓	✓	
Sample Preparation Batch			
Water samples have pH<2	✓	✓	
All prepared samples have Initial (weight or volume) and final (volume) listed.	✓	✓	
Batch contains no greater than 20 samples	✓	✓	
Method Blank and LCS digested	✓	✓	
MS and MSD digested. If not was LCSD digested? Reason for MS/MSD not digested	✓	✓	
For Hg: All calibration points (and CCV, ICV, RL check) digested and batched	NA	NA	
Data Documentation			
pH recorded for each sample	✓	✓	
Acids / reagents / standards entered with Lot #	✓	✓	
Thermometer ID Number with Correction factor entered	✓	✓	
Digestion Tube Lot # entered	✓	✓	
Hood ID and Hot Block number entered	✓	✓	
Start Time and End Time entered for digestion step	✓	✓	
Paperwork includes both marked-up hand-written draft benchsheet AND finalized printed benchsheet	✓	✓	
All errors are crossed out with a single line, initialed and dated	NA	NA	

Comments:

Tune Step	Mass	Name	R	a	b (blank)	DL	Units
1	9	Be	0.999992104	0.005373081	4.78477E-05	0.007025978	ug/l
1	23	Na	0.999982883	0.007061943	0.34591826	0.884463025	ug/l
1	24	Mg	0.999973685	0.004789119	0.0055505	0.102488636	ug/l
1	27	Al	0.999896763	0.00616498	0.002956914	0.046680395	ug/l
1	39	K	0.999986557	0.007128214	0.693337214	1.600578038	ug/l
1	44	Ca	0.999995631	0.0002441	0.00573689	1.384756388	ug/l
1	51	V	0.999999095	0.010471622	-0.001638802	0.121997612	ug/l
1	52	Cr	0.999996502	0.009018492	0.004837084	0.053414722	ug/l
1	55	Mn	0.999997768	0.011262434	0.001009326	0.003156111	ug/l
1	56	Fe	0.999991667	0.009484264	0.619981704	3.071148075	ug/l
1	59	Co	0.99999616	0.009701437	9.32844E-05	0.003771009	ug/l
1	60	Ni	0.99997775	0.002114885	0.000374898	0.037317745	ug/l
1	63	Cu	0.999994074	0.005082093	0.000825762	0.010153856	ug/l
1	65	Cu	0.999977895	0.002322986	0.000371493	0.021246919	ug/l
1	66	Zn	0.999403101	0.007937338	0.00839422	0.045154281	ug/l
1	75	As	0.99999026	0.007278374	0.000151232	0.442375956	ug/l
1	82	Se	0.999982304	0.000451086	6.12732E-05	0.030036232	ug/l
1	83	Kr	-0.106945942	6.36122E-08	0.000117912	324.2536134	ug/l
1	84	Kr	0.999997338	6.17783E-05	0.000621954	1.093382494	ug/l
1	88	Sr	0.999997757	0.009821858	0.000654289	0.006067697	ug/l
1	95	Mo	0.999994297	0.001928589	9.58766E-05	0.012740346	ug/l
1	107	Ag	0.999997203	0.004558308	0.000351311	0.066609151	ug/l
1	111	Cd	0.999997691	0.000973366	1.2056E-06	0.016845706	ug/l
1	120	Sn	0.999998072	0.003729058	0.000703457	0.113352174	ug/l
1	121	Sb	0.999998127	0.003893875	0.000116678	0.006958254	ug/l
1	137	Ba	0.99999471	0.001269218	3.07713E-05	0.010498657	ug/l
1	140	Ce	0.999998222	0.012221485	0.000138387	0.001978381	ug/l
1	205	Tl	0.999996153	0.005019623	7.0893E-05	0.005730583	ug/l
1	208	Pb	0.999999972	0.006700448	0.000110879	0.001038426	ug/l
1	238	U	0.999999779	0.007308483	0.000121835	0.006554211	ug/l
1	6	Li					ug/l
1	45	Sc					ug/l
1	72	Ge					ug/l
1	115	In					ug/l
1	159	Tb					ug/l

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MRC-57A-042313

Co: 5804g/L

Sample Name	**240-23592-D-8-A**
Data File Name	**031SMPL.D**
DataPath	**C:\ICPMH\1\DATA\130430-1.B**
Acq Date Time	**2013-04-30T13:47:08-07:00**
Type	**Sample**
VialNumber	**2211**
Dilution	**1**
Comment	**CAM 6020 440-100766 RD**
Operator	**RD**
ISTDRefDataFileName	**002CALB.D**
SamplePassFail	**Fail**
ISTD PassFail	**Pass**

QC Analyte Table

Element	m/z	ISTD	Tune	CPS	CPS %RSD	RawConc	FinalConc	Conc%RSD	Units	QC High	Flag	ConcentrationSD
Be	9	6	1	2487	7.46	0.4125	0.4125	7.85	ug/l	3600		0.0323622415555021
Na	23	45	1	OR	#VALUE!	OR	OR	#VALUE!	ug/l	90000		OR
Mg	24	45	1	823412945	0.41	32031.4963	32031.4963	1.64	ug/l	101250		526.011332524671
Al	27	45	1	1990378	27.81	59.5272	59.5272	26.63	ug/l	3600	>25%RSD	15.8511531087664
K	39	45	1	221252333	0.53	5685.2022	5685.2022	1.07	ug/l	78750		60.963227943558
Ca	44	45	1	68348775	1.37	52135.5774	52135.5774	0.11	ug/l	202500		57.5667725467463
V	51	45	1	11020	8.74	0.3524	0.3524	4.12	ug/l	3600		0.014511351017969
Cr	52	45	1	74694	1.14	1.0065	1.0065	0.29	ug/l	3600		0.00296134669348411
Mn	55	45	1	1784038685	1.11	29509.8470	29509.8470	1.18	ug/l	3600	>LDR	349.053197634312
Fe	56	45	1	2001843903	0.70	39258.2424	39258.2424	1.66	ug/l	36000	>LDR	651.509488167328
Co	59	45	1	29968132	0.46	575.4696	575.4696	1.02	ug/l	3150		5.85802109270386
Ni	60	45	1	4995632	1.91	439.8250	439.8250	0.83	ug/l	3600		3.63109946645837
Cu	63	45	1	180058	2.52	6.4377	6.4377	2.50	ug/l	3600		0.16089048096222
Cu	65	45	1	23359	0.98	1.7136	1.7136	2.44	ug/l	3600		0.0418769391004692
Zn	66	72	1	867459	1.28	110.7548	110.7548	0.73	ug/l	2700		0.811124577667576
As	75	72	1	16099	2.53	2.2420	2.2420	1.81	ug/l	3600		0.0406623992363983
Se	82	72	1	85	210.70	0.0581	0.0581	698.29	ug/l	3600	>25%RSD	0.405383757319184
Kr	83	115	1	881	14.95	400.6284	400.6284	76.91	ug/l	3600		308.114861821503
Kr	84	115	1	174290	1.18	449.6277	449.6277	2.21	ug/l	3600		9.92546595497017
Sr	88	115	1	27840938	0.19	461.7925	461.7925	1.52	ug/l	3600		7.00279867507826
Mo	95	115	1	12604	9.04	1.0146	1.0146	8.78	ug/l	3600		0.0890536193060406
Ag	107	115	1	684	13.98	-0.0526	-0.0526	-6.87	ug/l	100		0.00361507736085037
Cd	111	115	1	59	406.64	0.0083	0.0083	482.37	ug/l	3600	>25%RSD	0.0399113126310656
Sn	120	115	1	3643	14.41	-0.0296	-0.0296	-72.84	ug/l	3600		0.0215670333595226
Sb	121	115	1	1853	4.09	0.0476	0.0476	6.08	ug/l	3600		0.00289496008651127
Ba	137	115	1	931483	0.35	119.5541	119.5541	1.43	ug/l	3600		1.71194556952642
Ce	140	115	1	1675057	1.22	22.3217	22.3217	2.33	ug/l	3600		0.519141562616337
Tl	205	159	1	450	16.08	-0.0035	-0.0035	-49.00	ug/l	3600		0.0016980538894993
Pb	208	159	1	37400	1.81	0.6471	0.6471	1.63	ug/l	3600		0.0105474744989272
U	238	159	1	4240	3.79	0.0523	0.0523	5.02	ug/l	3600		0.00262438027817819

QC ISTD Table

Element	m/z	Tune	CPS	%RSD	Ref CPS	%Rec	%Low	%High	Flag
Li	6	1	1098628	2.00	1418832	77.4	59.5	120.49	
Sc	45	1	5368217	1.29	5441349	98.7	59.5	120.49	
Ge	72	1	977468	1.53	1026722	95.2	59.5	120.49	
In	115	1	6138213	1.40	6657288	92.2	59.5	120.49	
Tb	159	1	8410203	0.33	8897977	94.5	59.5	120.49	

TuneStep	TuneFile
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Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **MAY 30, 2013**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION - VOC/SVOC/DISSOLVED GASES/PECHLORATE/METALS/MISCELLANEOUS**
LOCKHEED MARTIN – MRC
SDG 240-23812-1

SAMPLES: 7/Aqueous/VOC

MRC-MW-111A-042913 MRC-MW-111B-042913 MRC-MW-48A-042913
MRC-MW41A-042913 MRC-MW98A-042913 MRC-MW98B-042913
TB-042913

5/Aqueous/SVOC

MRC-MW-111A-042913 MRC-MW-111B-042913 MRC-MW41A-042913
MRC-MW98A-042913 MRC-MW98B-042913

1/Aqueous/PERCHLORATE

MRC-MW41A-042913

4/Aqueous/METALS (Sb, As, Ba, Be, Cd Cr, Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, and Zn)

MRC-MW-111B-042913 MRC-MW41A-042913 MRC-MW98A-042913
MRC-MW98B-042913

1/Aqueous/METALS (Sb, As, Ba, Be, Cd Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Na, Tl, V, Zn, Silicon dioxide) / DISSOLVED GASES / MISCELLANEOUS

MRC-MW-48A-042913

Overview

The sample set for Lockheed Martin – MRC, SDG 240-23812-1 consists of six (6) aqueous environmental samples and one (1) trip blank. The samples were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), dissolved gases, perchlorate, metals, and miscellaneous as outlined above.

The samples were collected by Tetra Tech on April 29, 2013 and analyzed by Test America (North Canton). All analyses were conducted in accordance with SW-846 Methods 8260B, 8270D, 6010C, 6020A, 7470A, 6850, 9060, dissolved gases by method RSK-175, and standard methods 160.1, 300.0, 310.1, and 350.3 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, internal standard recoveries, ICP interference results, laboratory duplicate results, ICP serial dilution results, chromatographic resolution, analyte identification, analyte quantitation, and detection limits. Areas of concern are listed below.

Major

- The VOC initial calibration and associated continuing calibrations relative response factors (RRFs) were less than the 0.05 quality control limit for tert-butyl alcohol and acetone on instrument A3UX11. Only non-detected results were reported for tert-butyl alcohol and vinyl acetate and these results were rejected (UR).

- The matrix spike / matrix spike duplicate (MS/MSD) performed on sample MRC-MW98B-042913 had zero percent recoveries for 2-chloroethyl vinyl, low recoveries for 1,1-dichloroethene, and high recoveries for tert-butyl alcohol in the MS and MSD. The nondetected 2-chloroethyl vinyl ether result for sample MRC-MW98B-042913 has been rejected (UR). The positive 1,1-dichloroethene result for sample MRC-MW98B-042913 has been qualified biased low (L). No action was taken on the tert-butyl alcohol result because the result was rejected previously due to a more severe noncompliance.

Minor

- The following compound was detected in the method blank at the maximum concentration indicated below:

Compound	Concentration	Action Level
Methane[1]	0.103 ug/L	0.515 ug/L

1 – Detected in the method blank associated with sample MRC-MW-48A-042913.

An action level of 5 times the maximum contaminant concentration was established for methane to evaluate laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. No action was taken on this basis because the methane result was greater than the action level.

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Calcium[1]	216 ug/L	1080 ug/L
Magnesium[1]	72.4 ug/L	362 ug/L
Manganese[1]	1.2 ug/L	6 ug/L
Silver[2]	0.131 ug/L	0.655 ug/L
Cobalt[3]	0.168 ug/L	0.84 ug/L
Chloride[4]	0.264 mg/L	1.32 mg/L
Ammonia[5]	0.0524 mg/L	0.2885 mg/L

(1) Maximum concentration present in MB 84271/1-A affecting sample MRC-MW-48A-042913.
(2) Maximum concentration present in CCB 103278/18 affecting all samples.
(3) Maximum concentration present in CCB 103278/30 affecting all samples.
(4) Maximum concentration present in MB 84749/3 affecting sample MRC-MW-48A-042913.
(5) Maximum concentration present in MB 84533/7 affecting sample MRC-MW-48A-042913.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive result less than the blank action level reported for cobalt and ammonia for sample MRC-MW98A-042913 were qualified (B) as a result of laboratory blank contamination.

- The contract required detection limits (CRDLs) analyzed on 5/08/13 @ 11;52 and 11;54 had percent recoveries for barium, chromium, and nickel, and zinc > 110% and selenium < 80% quality control limit affecting all samples. Positive result < 2X CRDL reported for zinc in sample MRC-MW41A-042913 was qualified as biased high (K). Positive result < 2X CRDL reported for selenium in sample MRC-MW98A-042913 was qualified as estimated (J) due to conflicting directional bias. The nondetected selenium results for the affected samples were qualified as biased low (UL).

- The CRDL percent recovery for mercury on 05/06/13 at 12:11 was < 80% quality control limit. The nondetected mercury result for sample MRC-MW-48A-042913 was qualified as biased low (UL).

- The orthophosphate matrix spike (MS) performed on sample MRC-MW-48A-042913 had a percent recovery less than the quality control limit. The nondetected orthophosphate result has been qualified as biased low (UL).

- Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Notes

Samples MRC-MW-111B-042913, MRC-MW-48A-042913, and MRC-MW98B-042913 were diluted for VOCs due to concentrations greater than the linear calibration range of the instrument. This accounts for the elevated detection limits for the nondetected compounds.

Samples MRC-MW-111B-042913 and MRC-MW98B-042913 were diluted due to 1,4-dioxane concentrations greater than the linear calibration range of the instrument.

The VOC continuing calibration %Ds were greater than the quality control limit of 20% and less than 50% for 1,1,2-trichlorotrifluoroethane, naphthalene, and 1,2,3-trichlorobenzene for instrument A3UX11 on 05/09/13 @ 10:28. No action was taken on this basis because only nondetected results were reported for the aforementioned compounds in the affected samples.

The laboratory control sample (LCS) associated with batch 85269/4 had a percent recovery greater than the quality control limit for tert-butyl alcohol. No action was taken on this basis because the tert-butyl alcohol results were previously rejected due to a more severe noncompliance.

The CRDL percent recovery for magnesium 05/02/13 at 14:11 was > 110% quality control limit affecting sample MRC-MW-48A-042913. No validation action was required as the result was > 2X CRDL.

The interfering analyte sodium was present in sample MRC-MW-48A-042913 at a concentration comparable to the concentration of sodium in the interference check sample (ICS) solution. Several analytes namely, antimony, cadmium, chromium, cobalt, and nickel were present in the ICS solution at concentrations that exceeded the absolute value of the instrument detection limit (IDL). No action was taken on this basis because either the results were nondetected or were greater than 2X the CRDL.

Executive Summary

Laboratory Performance: Two VOC compounds had RRF noncompliances resulting in the rejection of data. Blank contamination resulted in the qualification of data for the metals and miscellaneous fractions. A orthphosphate MS had a low percent recovery resulting in qualification of the data. MS/MSD noncompliances resulted in the qualification of data for VOC fraction. The CRDL percent recoveries for several analytes were outside the 90-110% quality control limit.

Other Factors Affecting Data Quality: Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 04795	NSAMPLE	MRC-MW-111A-042913			MRC-MW-111B-042913			MRC-MW41A-042913			MRC-MW-48A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-6			240-23812-7			240-23812-2			240-23812-5		
FRACTION: OV	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		3.3	U		0.23	U		5.8	U	
1,1,1-TRICHLOROETHANE		0.22	U		3.1	U		0.22	U		5.5	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		2.6	U		0.18	U		4.5	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		4	U		0.28	U		7	U	
1,1-DICHLOROETHANE		0.15	U		29			0.15	U		3.8	U	
1,1-DICHLOROETHENE		0.19	U		140			0.19	U		4.8	U	
1,1-DICHLOROPROPENE		0.13	U		1.9	U		0.13	U		3.3	U	
1,2,3-TRICHLOROBENZENE		0.17	U		2.4	U		0.17	U		4.3	U	
1,2,3-TRICHLOROPROPANE		0.43	U		6.1	U		0.43	U		11	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.084	U		0.0059	U		0.15	U	
1,2,4-TRICHLOROBENZENE		0.15	U		2.1	U		0.15	U		3.8	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		1.7	U		0.12	U		3	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		9.6	U		0.67	U		17	U	
1,2-DIBROMOETHANE		0.24	U		3.4	U		0.24	U		6	U	
1,2-DICHLOROBENZENE		0.13	U		1.9	U		0.13	U		3.3	U	
1,2-DICHLOROETHANE		0.22	U		3.1	U		0.22	U		5.5	U	
1,2-DICHLOROPROPANE		0.18	U		2.6	U		0.18	U		4.5	U	
1,3-DICHLOROBENZENE		0.14	U		2	U		0.14	U		3.5	U	
1,3-DICHLOROPROPANE		0.16	U		2.3	U		0.16	U		4	U	
1,4-DICHLOROBENZENE		0.13	U		1.9	U		0.13	U		3.3	U	
2,2-DICHLOROPROPANE		0.13	U		1.9	U		0.13	U		3.3	U	
2-BUTANONE		0.57	U		8.1	U		0.57	U		14	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		14	U		0.99	U		25	U	
2-CHLOROTOLUENE		0.11	U		1.6	U		0.11	U		2.8	U	
2-HEXANONE		0.41	U		5.9	U		0.41	U		10	U	
4-CHLOROTOLUENE		0.18	U		2.6	U		0.18	U		4.5	U	
4-ISOPROPYLTOLUENE		0.12	U		1.7	U		0.12	U		3	U	
4-METHYL-2-PENTANONE		0.32	U		4.6	U		0.32	U		8	U	
ACETONE		1.1	UR	C	16	UR	C	1.1	UR	C	28	UR	C
BENZENE		0.13	U		2.5	J		0.13	U		3.3	U	
BROMOBENZENE		0.13	U		1.9	U		0.13	U		3.3	U	
BROMOCHLOROMETHANE		0.29	U		4.1	U		0.29	U		7.3	U	
BROMODICHLOROMETHANE		0.15	U		2.1	U		0.15	U		3.8	U	
BROMOFORM		0.64	U		9.1	U		0.64	U		16	U	
BROMOMETHANE		0.41	U		5.9	U		0.41	U		10	U	
CARBON DISULFIDE		0.13	U		1.9	U		0.13	U		3.3	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW98A-042913			MRC-MW98B-042913			TB-042913		
SDG: 240-23812-1	LAB_ID	240-23812-3			240-23812-4			240-23812-1		
FRACTION: OV	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		3.8	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		60			0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		3	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		4.7	U		0.28	U	
1,1-DICHLOROETHANE		2.2			110			0.15	U	
1,1-DICHLOROETHENE		3.4			250	L	D	0.19	U	
1,1-DICHLOROPROPENE		0.13	U		2.2	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		2.8	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		7.2	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.098	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		2.5	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		2	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		11	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		4	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		2.2	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		3.7	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		3	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		2.3	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		2.7	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		2.2	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		2.2	U		0.13	U	
2-BUTANONE		0.57	U		9.5	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		17	UR	D	0.99	U	
2-CHLOROTOLUENE		0.11	U		1.8	U		0.11	U	
2-HEXANONE		0.41	U		6.8	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		3	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		2	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		5.3	U		0.32	U	
ACETONE		1.1	UR	C	18	UR	C	1.1	UR	C
BENZENE		0.13	U		2.2	U		0.13	U	
BROMOBENZENE		0.13	U		2.2	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		4.8	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		2.5	U		0.15	U	
BROMOFORM		0.64	U		11	U		0.64	U	
BROMOMETHANE		0.41	U		6.8	U		0.41	U	
CARBON DISULFIDE		0.13	U		2.2	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-111A-042913			MRC-MW-111B-042913			MRC-MW41A-042913			MRC-MW-48A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-6			240-23812-7			240-23812-2			240-23812-5		
FRACTION: OV	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		1.9	U		0.13	U		3.3	U	
CHLOROBENZENE		0.15	U		2.1	U		0.15	U		3.8	U	
CHLORODIBROMOMETHANE		0.18	U		2.6	U		0.18	U		4.5	U	
CHLOROETHANE		0.29	U		4.1	U		0.29	U		7.3	U	
CHLOROFORM		0.16	U		2.3	U		0.16	U		4	U	
CHLOROMETHANE		0.3	U		4.3	U		0.3	U		7.5	U	
CIS-1,2-DICHLOROETHENE		0.17	U		39			0.17	U		590		
CIS-1,3-DICHLOROPROPENE		0.14	U		2	U		0.14	U		3.5	U	
DIBROMOMETHANE		0.28	U		4	U		0.28	U		7	U	
DICHLORODIFLUOROMETHANE		0.31	U		4.4	U		0.31	U		7.8	U	
DIISOPROPYL ETHER		1.5	U		21	U		1.5	U		38	U	
ETHYL TERT-BUTYL ETHER		0.11	U		1.6	U		0.11	U		2.8	U	
ETHYLBENZENE		0.17	U		2.4	U		0.17	U		4.3	U	
HEXACHLOROBUTADIENE		0.3	U		4.3	U		0.3	U		7.5	U	
ISOPROPYLBENZENE		0.13	U		1.9	U		0.13	U		3.3	U	
M+P-XYLENES		0.24	U		3.4	U		0.24	U		6	U	
METHYL TERT-BUTYL ETHER		0.17	U		2.4	U		0.17	U		4.3	U	
METHYLENE CHLORIDE		0.33	U		11	J		0.33	U		19	J	
NAPHTHALENE		0.24	U		3.4	U		0.24	U		6	U	
N-BUTYLBENZENE		0.12	U		1.7	U		0.12	U		3	U	
N-PROPYLBENZENE		0.14	U		2	U		0.14	U		3.5	U	
O-XYLENE		0.14	U		2	U		0.14	U		3.5	U	
SEC-BUTYLBENZENE		0.13	U		1.9	U		0.13	U		3.3	U	
SILANOL, TRIMETHYL-		3.2	R	Z2									
STYRENE		0.11	U		1.6	U		0.11	U		2.8	U	
TERT-AMYL METHYL ETHER		0.067	U		0.96	U		0.067	U		1.7	U	
TERT-BUTYLBENZENE		0.13	U		1.9	U		0.13	U		3.3	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	56	UR	C	3.9	UR	C	98	UR	C
TETRACHLOROETHENE		0.29	U		4.1	U		0.29	U		7.3	U	
TOLUENE		0.13	U		1.9	U		0.13	U		3.3	U	
TOTAL XYLENES		0.28	U		4	U		0.28	U		7	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		2.7	U		0.19	U		4.9	J	
TRANS-1,3-DICHLOROPROPENE		0.19	U		2.7	U		0.19	U		4.8	U	
TRICHLOROETHENE		0.29	J		460			0.17	U		700		
TRICHLOROFLUOROMETHANE		0.21	U		3	U		0.21	U		5.3	U	
VINYL ACETATE		0.19	U		2.7	U		0.19	U		4.8	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW98A-042913			MRC-MW98B-042913			TB-042913		
SDG: 240-23812-1	LAB_ID	240-23812-3			240-23812-4			240-23812-1		
FRACTION: OV	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		2.2	U		0.13	U	
CHLOROBENZENE		0.15	U		2.5	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		3	U		0.18	U	
CHLOROETHANE		0.29	U		32			0.29	U	
CHLOROFORM		0.16	U		2.7	U		0.16	U	
CHLOROMETHANE		0.3	U		5	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.56	J		28			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		2.3	U		0.14	U	
DIBROMOMETHANE		0.28	U		4.7	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		5.2	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		25	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		1.8	U		0.11	U	
ETHYLBENZENE		0.17	U		2.8	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		5	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		2.2	U		0.13	U	
M+P-XYLENES		0.24	U		4	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		2.8	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		25			0.33	U	
NAPHTHALENE		0.24	U		4	U		0.24	U	
N-BUTYLBENZENE		0.12	U		2	U		0.12	U	
N-PROPYLBENZENE		0.14	U		2.3	U		0.14	U	
O-XYLENE		0.14	U		2.3	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		2.2	U		0.13	U	
SILANOL, TRIMETHYL-								3.2	R	Z2
STYRENE		0.11	U		1.8	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		1.1	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		2.2	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	65	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.38	J		6.7	J		0.29	U	
TOLUENE		0.13	U		2.2	U		0.13	U	
TOTAL XYLENES		0.28	U		4.7	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		3.2	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		3.2	U		0.19	U	
TRICHLOROETHENE		4.2			530			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		3.5	U		0.21	U	
VINYL ACETATE		0.19	U		3.2	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-111A-042913			MRC-MW-111B-042913			MRC-MW41A-042913			MRC-MW-48A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-6			240-23812-7			240-23812-2			240-23812-5		
FRACTION: OV	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL CHLORIDE		0.22	U		3.1	U		0.22	U		56		

PROJ_NO: 04795	NSAMPLE	MRC-MW98A-042913			MRC-MW98B-042913			TB-042913		
SDG: 240-23812-1	LAB_ID	240-23812-3			240-23812-4			240-23812-1		
FRACTION: OV	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL CHLORIDE		0.22	U		3.7	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-111A-042913			MRC-MW-111B-042913			MRC-MW41A-042913			MRC-MW98A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-6			240-23812-7			240-23812-2			240-23812-3		
FRACTION: OS	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.68	J	P	84			0.49	U		2.5		

PROJ_NO: 04795	NSAMPLE	MRC-MW98B-042913		
SDG: 240-23812-1	LAB_ID	240-23812-4		
FRACTION: OS	SAMP_DATE	4/29/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,4-DIOXANE		120		

PROJ_NO: 04795	NSAMPLE	MRC-MW-48A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-5		
FRACTION: OVG	SAMP_DATE	4/29/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ETHANE		31		
ETHENE		13		
METHANE		4800		

PROJ_NO: 04795	NSAMPLE	MRC-MW-111B-042913			MRC-MW41A-042913			MRC-MW-48A-042913			MRC-MW98A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-7			240-23812-2			240-23812-5			240-23812-3		
FRACTION: M	SAMP_DATE	4/29/2013			4/29/2013			4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		0.3	U		0.3	U		0.3	U	
ARSENIC		4.1	J	P	0.98	J	P	0.9	U		0.9	U	
BARIUM		73			610			160			45		
BERYLLIUM		0.34	J	P	1			3.1			0.1	U	
CADMIUM		0.1	U		0.1	U		0.1	U		0.1	U	
CALCIUM								1600	J	P			
CHROMIUM		0.9	U		0.9	U		0.9	U		9.4		
COBALT		47			550			100			0.8	B	A
COPPER		0.5	U		1.2	J	P	0.5	U		1.4	J	P
IRON								31000					
LEAD		0.2	U		0.53	J	P	0.2	U		0.64	J	P
MAGNESIUM								11000					
MANGANESE								9700					
MERCURY		0.1	UL	C	0.1	UL	C	0.12	UL	C	0.1	UL	C
MOLYBDENUM		0.2	U		0.26	J	P	0.2	U		0.89	J	P
NICKEL		84			400			63			2.1		
POTASSIUM								420	J	P			
SELENIUM		0.5	UL	C	0.5	UL	C	0.5	UL	C	2.1	J	CP
SILICON DIOXIDE								12000					
SILVER		0.1	U		0.1	U		0.1	U		0.1	U	
SODIUM								28000					
THALLIUM		0.2	U		0.2	U		0.2	U		0.2	U	
VANADIUM		0.8	U		0.8	U		0.8	U		1.8	J	P
ZINC		59			39	K	C	60			4	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW98B-042913		
SDG: 240-23812-1	LAB_ID	240-23812-4		
FRACTION: M	SAMP_DATE	4/29/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.43	J	P
ARSENIC		0.9	U	
BARIUM		42		
BERYLLIUM		13		
CADMIUM		0.21	J	P
CALCIUM				
CHROMIUM		0.9	U	
COBALT		86		
COPPER		2.6		
IRON				
LEAD		0.93	J	P
MAGNESIUM				
MANGANESE				
MERCURY		0.1	UL	C
MOLYBDENUM		0.2	U	
NICKEL		140		
POTASSIUM				
SELENIUM		0.5	UL	C
SILICON DIOXIDE				
SILVER		0.1	U	
SODIUM				
THALLIUM		0.2	U	
VANADIUM		0.8	U	
ZINC		220		

PROJ_NO: 04795	NSAMPLE	MRC-MW41A-042913			MRC-MW-48A-042913		
SDG: 240-23812-1	LAB_ID	240-23812-2			240-23812-5		
FRACTION: MISC	SAMP_DATE	4/29/2013			4/29/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY					60		
AMMONIA-N					0.046	B	A
CHLORIDE					73		
DISSOLVED ORGANIC CARBON					3.8		
NITRATE-N					0.023	U	
NITRITE-N					0.012	U	
ORTHOPHOSPHATE-P					0.044	UL	D
PERCHLORATE		0.082	U				
SULFATE					6.6		
TOTAL DISSOLVED SOLIDS					190		

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111A-042913 | Lab Sample ID: 240-23812-6

Matrix: Water | Lab File ID: UXJ1436.D

Analysis Method: 8260B | Date Collected: 04/29/2013 13:51

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111A-042913 | Lab Sample ID: 240-23812-6

Matrix: Water | Lab File ID: UXJ1436.D

Analysis Method: 8260B | Date Collected: 04/29/2013 13:51

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	0.29	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111A-042913 | Lab Sample ID: 240-23812-6

Matrix: Water | Lab File ID: UXJ1436.D

Analysis Method: 8260B | Date Collected: 04/29/2013 13:51

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111A-042913 Lab Sample ID: 240-23812-6

Matrix: Water Lab File ID: UXJ1436.D

Analysis Method: 8260B Date Collected: 04/29/2013 13:51

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 15:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.04	3.2	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111B-042913 | Lab Sample ID: 240-23812-7

Matrix: Water | Lab File ID: UXJ1437.D

Analysis Method: 8260B | Date Collected: 04/29/2013 15:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:45

Soil Aliquot Vol: | Dilution Factor: 14.29

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	71	U	71	16
71-43-2	Benzene	2.5	J	14	1.9
108-86-1	Bromobenzene	14	U	14	1.9
74-97-5	Bromochloromethane	14	U	14	4.1
75-27-4	Bromodichloromethane	14	U	14	2.1
75-25-2	Bromoform	14	U	14	9.1
74-83-9	Bromomethane	14	U	14	5.9
78-93-3	2-Butanone	71	U	71	8.1
75-15-0	Carbon disulfide	14	U	14	1.9
56-23-5	Carbon tetrachloride	14	U	14	1.9
108-90-7	Chlorobenzene	14	U	14	2.1
75-00-3	Chloroethane	14	U	14	4.1
110-75-8	2-Chloroethyl vinyl ether	140	U	140	14
67-66-3	Chloroform	14	U	14	2.3
74-87-3	Chloromethane	14	U	14	4.3
95-49-8	2-Chlorotoluene	14	U	14	1.6
106-43-4	4-Chlorotoluene	14	U	14	2.6
156-59-2	cis-1,2-Dichloroethene	39		14	2.4
10061-01-5	cis-1,3-Dichloropropene	14	U	14	2.0
124-48-1	Dibromochloromethane	14	U	14	2.6
96-12-8	1,2-Dibromo-3-Chloropropane	71	U	71	9.6
106-93-4	1,2-Dibromoethane	14	U	14	3.4
74-95-3	Dibromomethane	14	U	14	4.0
95-50-1	1,2-Dichlorobenzene	14	U	14	1.9
541-73-1	1,3-Dichlorobenzene	14	U	14	2.0
106-46-7	1,4-Dichlorobenzene	14	U	14	1.9
75-71-8	Dichlorodifluoromethane	14	U	14	4.4
75-34-3	1,1-Dichloroethane	29		14	2.1
107-06-2	1,2-Dichloroethane	14	U	14	3.1
75-35-4	1,1-Dichloroethene	140		14	2.7
78-87-5	1,2-Dichloropropane	14	U	14	2.6
142-28-9	1,3-Dichloropropane	14	U	14	2.3
594-20-7	2,2-Dichloropropane	14	U	14	1.9
563-58-6	1,1-Dichloropropene	14	U	14	1.9
108-20-3	Diisopropyl ether	71	U	71	21
100-41-4	Ethylbenzene	14	U	14	2.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111B-042913 | Lab Sample ID: 240-23812-7

Matrix: Water | Lab File ID: UXJ1437.D

Analysis Method: 8260B | Date Collected: 04/29/2013 15:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:45

Soil Aliquot Vol: | Dilution Factor: 14.29

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	71	U	71	1.6
87-68-3	Hexachlorobutadiene	14	U	14	4.3
591-78-6	2-Hexanone	71	U	71	5.9
98-82-8	Isopropylbenzene	14	U	14	1.9
75-09-2	Methylene Chloride	11	J	14	4.7
108-10-1	4-Methyl-2-pentanone	71	U	71	4.6
1634-04-4	Methyl tert-butyl ether	14	U	14	2.4
179601-23-1	m-Xylene & p-Xylene	29	U	29	3.4
91-20-3	Naphthalene	14	U	14	3.4
104-51-8	n-Butylbenzene	14	U	14	1.7
103-65-1	n-Propylbenzene	14	U	14	2.0
95-47-6	o-Xylene	14	U	14	2.0
99-87-6	p-Isopropyltoluene	14	U	14	1.7
135-98-8	sec-Butylbenzene	14	U	14	1.9
100-42-5	Styrene	14	U	14	1.6
994-05-8	Tert-amyl-methyl ether (TAME)	71	U	71	0.96
75-65-0	tert-Butyl alcohol	290	U *	290	56
98-06-6	tert-Butylbenzene	14	U	14	1.9
630-20-6	1,1,1,2-Tetrachloroethane	14	U	14	3.3
79-34-5	1,1,2,2-Tetrachloroethane	14	U	14	2.6
127-18-4	Tetrachloroethene	14	U	14	4.1
108-88-3	Toluene	14	U	14	1.9
156-60-5	trans-1,2-Dichloroethene	14	U	14	2.7
10061-02-6	trans-1,3-Dichloropropene	14	U	14	2.7
87-61-6	1,2,3-Trichlorobenzene	14	U	14	2.4
120-82-1	1,2,4-Trichlorobenzene	14	U	14	2.1
71-55-6	1,1,1-Trichloroethane	14	U	14	3.1
79-01-6	Trichloroethene	460		14	2.4
75-69-4	Trichlorofluoromethane	14	U	14	3.0
96-18-4	1,2,3-Trichloropropane	14	U	14	6.1
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	14	U	14	4.0
526-73-8	1,2,3-Trimethylbenzene	71	U	71	0.084
95-63-6	1,2,4-Trimethylbenzene	14	U	14	1.7
108-05-4	Vinyl acetate	29	U	29	2.7
75-01-4	Vinyl chloride	14	U	14	3.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111B-042913 | Lab Sample ID: 240-23812-7

Matrix: Water | Lab File ID: UXJ1437.D

Analysis Method: 8260B | Date Collected: 04/29/2013 15:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:45

Soil Aliquot Vol: | Dilution Factor: 14.29

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	29	U	29	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111B-042913 Lab Sample ID: 240-23812-7

Matrix: Water Lab File ID: UXJ1437.D

Analysis Method: 8260B Date Collected: 04/29/2013 15:10

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 15:45

Soil Aliquot Vol: Dilution Factor: 14.29

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Matrix: Water Lab File ID: UXJ1435.D

Analysis Method: 8260B Date Collected: 04/29/2013 11:03

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:59

Soil Aliquot Vol: Dilution Factor: 25

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	130	U	130	28
71-43-2	Benzene	25	U	25	3.3
108-86-1	Bromobenzene	25	U	25	3.3
74-97-5	Bromochloromethane	25	U	25	7.3
75-27-4	Bromodichloromethane	25	U	25	3.8
75-25-2	Bromoform	25	U	25	16
74-83-9	Bromomethane	25	U	25	10
78-93-3	2-Butanone	130	U	130	14
75-15-0	Carbon disulfide	25	U	25	3.3
56-23-5	Carbon tetrachloride	25	U	25	3.3
108-90-7	Chlorobenzene	25	U	25	3.8
75-00-3	Chloroethane	25	U	25	7.3
110-75-8	2-Chloroethyl vinyl ether	250	U	250	25
67-66-3	Chloroform	25	U	25	4.0
74-87-3	Chloromethane	25	U	25	7.5
95-49-8	2-Chlorotoluene	25	U	25	2.8
106-43-4	4-Chlorotoluene	25	U	25	4.5
156-59-2	cis-1,2-Dichloroethene	590		25	4.3
10061-01-5	cis-1,3-Dichloropropene	25	U	25	3.5
124-48-1	Dibromochloromethane	25	U	25	4.5
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	130	17
106-93-4	1,2-Dibromoethane	25	U	25	6.0
74-95-3	Dibromomethane	25	U	25	7.0
95-50-1	1,2-Dichlorobenzene	25	U	25	3.3
541-73-1	1,3-Dichlorobenzene	25	U	25	3.5
106-46-7	1,4-Dichlorobenzene	25	U	25	3.3
75-71-8	Dichlorodifluoromethane	25	U	25	7.8
75-34-3	1,1-Dichloroethane	25	U	25	3.8
107-06-2	1,2-Dichloroethane	25	U	25	5.5
75-35-4	1,1-Dichloroethene	25	U	25	4.8
78-87-5	1,2-Dichloropropane	25	U	25	4.5
142-28-9	1,3-Dichloropropane	25	U	25	4.0
594-20-7	2,2-Dichloropropane	25	U	25	3.3
563-58-6	1,1-Dichloropropene	25	U	25	3.3
108-20-3	Diisopropyl ether	130	U	130	38
100-41-4	Ethylbenzene	25	U	25	4.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Matrix: Water Lab File ID: UXJ1435.D

Analysis Method: 8260B Date Collected: 04/29/2013 11:03

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:59

Soil Aliquot Vol: Dilution Factor: 25

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	130	U	130	2.8
87-68-3	Hexachlorobutadiene	25	U	25	7.5
591-78-6	2-Hexanone	130	U	130	10
98-82-8	Isopropylbenzene	25	U	25	3.3
75-09-2	Methylene Chloride	19	J	25	8.3
108-10-1	4-Methyl-2-pentanone	130	U	130	8.0
1634-04-4	Methyl tert-butyl ether	25	U	25	4.3
179601-23-1	m-Xylene & p-Xylene	50	U	50	6.0
91-20-3	Naphthalene	25	U	25	6.0
104-51-8	n-Butylbenzene	25	U	25	3.0
103-65-1	n-Propylbenzene	25	U	25	3.5
95-47-6	o-Xylene	25	U	25	3.5
99-87-6	p-Isopropyltoluene	25	U	25	3.0
135-98-8	sec-Butylbenzene	25	U	25	3.3
100-42-5	Styrene	25	U	25	2.8
994-05-8	Tert-amyl-methyl ether (TAME)	130	U	130	1.7
75-65-0	tert-Butyl alcohol	500	U *	500	98
98-06-6	tert-Butylbenzene	25	U	25	3.3
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	5.8
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	4.5
127-18-4	Tetrachloroethene	25	U	25	7.3
108-88-3	Toluene	25	U	25	3.3
156-60-5	trans-1,2-Dichloroethene	4.9	J	25	4.8
10061-02-6	trans-1,3-Dichloropropene	25	U	25	4.8
87-61-6	1,2,3-Trichlorobenzene	25	U	25	4.3
120-82-1	1,2,4-Trichlorobenzene	25	U	25	3.8
71-55-6	1,1,1-Trichloroethane	25	U	25	5.5
79-01-6	Trichloroethene	700		25	4.3
75-69-4	Trichlorofluoromethane	25	U	25	5.3
96-18-4	1,2,3-Trichloropropane	25	U	25	11
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	25	U	25	7.0
526-73-8	1,2,3-Trimethylbenzene	130	U	130	0.15
95-63-6	1,2,4-Trimethylbenzene	25	U	25	3.0
108-05-4	Vinyl acetate	50	U	50	4.8
75-01-4	Vinyl chloride	56		25	5.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 | Lab Sample ID: 240-23812-5

Matrix: Water | Lab File ID: UXJ1435.D

Analysis Method: 8260B | Date Collected: 04/29/2013 11:03

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:59

Soil Aliquot Vol: | Dilution Factor: 25

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	50	U	50	7.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Matrix: Water Lab File ID: UXJ1435.D

Analysis Method: 8260B Date Collected: 04/29/2013 11:03

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:59

Soil Aliquot Vol: Dilution Factor: 25

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW41A-042913 | Lab Sample ID: 240-23812-2

Matrix: Water | Lab File ID: UXJ1432.D

Analysis Method: 8260B | Date Collected: 04/29/2013 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 13:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW41A-042913 Lab Sample ID: 240-23812-2

Matrix: Water Lab File ID: UXJ1432.D

Analysis Method: 8260B Date Collected: 04/29/2013 10:40

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 13:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW41A-042913 | Lab Sample ID: 240-23812-2

Matrix: Water | Lab File ID: UXJ1432.D

Analysis Method: 8260B | Date Collected: 04/29/2013 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 13:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW41A-042913 Lab Sample ID: 240-23812-2

Matrix: Water Lab File ID: UXJ1432.D

Analysis Method: 8260B Date Collected: 04/29/2013 10:40

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 13:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98A-042913 | Lab Sample ID: 240-23812-3

Matrix: Water | Lab File ID: UXJ1433.D

Analysis Method: 8260B | Date Collected: 04/29/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.56	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	2.2		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	3.4		1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98A-042913 | Lab Sample ID: 240-23812-3

Matrix: Water | Lab File ID: UXJ1433.D

Analysis Method: 8260B | Date Collected: 04/29/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	0.38	J	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	4.2		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98A-042913 | Lab Sample ID: 240-23812-3

Matrix: Water | Lab File ID: UXJ1433.D

Analysis Method: 8260B | Date Collected: 04/29/2013 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98A-042913 Lab Sample ID: 240-23812-3

Matrix: Water Lab File ID: UXJ1433.D

Analysis Method: 8260B Date Collected: 04/29/2013 12:25

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98B-042913 Lab Sample ID: 240-23812-4

Matrix: Water Lab File ID: UXJ1434.D

Analysis Method: 8260B Date Collected: 04/29/2013 14:20

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:36

Soil Aliquot Vol: Dilution Factor: 16.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	83	U	83	18
71-43-2	Benzene	17	U	17	2.2
108-86-1	Bromobenzene	17	U	17	2.2
74-97-5	Bromochloromethane	17	U	17	4.8
75-27-4	Bromodichloromethane	17	U	17	2.5
75-25-2	Bromoform	17	U	17	11
74-83-9	Bromomethane	17	U	17	6.8
78-93-3	2-Butanone	83	U	83	9.5
75-15-0	Carbon disulfide	17	U	17	2.2
56-23-5	Carbon tetrachloride	17	U	17	2.2
108-90-7	Chlorobenzene	17	U	17	2.5
75-00-3	Chloroethane	32		17	4.8
110-75-8	2-Chloroethyl vinyl ether	170	U	170	17
67-66-3	Chloroform	17	U	17	2.7
74-87-3	Chloromethane	17	U	17	5.0
95-49-8	2-Chlorotoluene	17	U	17	1.8
106-43-4	4-Chlorotoluene	17	U	17	3.0
156-59-2	cis-1,2-Dichloroethene	28		17	2.8
10061-01-5	cis-1,3-Dichloropropene	17	U	17	2.3
124-48-1	Dibromochloromethane	17	U	17	3.0
96-12-8	1,2-Dibromo-3-Chloropropane	83	U	83	11
106-93-4	1,2-Dibromoethane	17	U	17	4.0
74-95-3	Dibromomethane	17	U	17	4.7
95-50-1	1,2-Dichlorobenzene	17	U	17	2.2
541-73-1	1,3-Dichlorobenzene	17	U	17	2.3
106-46-7	1,4-Dichlorobenzene	17	U	17	2.2
75-71-8	Dichlorodifluoromethane	17	U	17	5.2
75-34-3	1,1-Dichloroethane	110		17	2.5
107-06-2	1,2-Dichloroethane	17	U	17	3.7
75-35-4	1,1-Dichloroethene	250		17	3.2
78-87-5	1,2-Dichloropropane	17	U	17	3.0
142-28-9	1,3-Dichloropropane	17	U	17	2.7
594-20-7	2,2-Dichloropropane	17	U	17	2.2
563-58-6	1,1-Dichloropropene	17	U	17	2.2
108-20-3	Diisopropyl ether	83	U	83	25
100-41-4	Ethylbenzene	17	U	17	2.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98B-042913 | Lab Sample ID: 240-23812-4

Matrix: Water | Lab File ID: UXJ1434.D

Analysis Method: 8260B | Date Collected: 04/29/2013 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:36

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	83	U	83	1.8
87-68-3	Hexachlorobutadiene	17	U	17	5.0
591-78-6	2-Hexanone	83	U	83	6.8
98-82-8	Isopropylbenzene	17	U	17	2.2
75-09-2	Methylene Chloride	25		17	5.5
108-10-1	4-Methyl-2-pentanone	83	U	83	5.3
1634-04-4	Methyl tert-butyl ether	17	U	17	2.8
179601-23-1	m-Xylene & p-Xylene	33	U	33	4.0
91-20-3	Naphthalene	17	U	17	4.0
104-51-8	n-Butylbenzene	17	U	17	2.0
103-65-1	n-Propylbenzene	17	U	17	2.3
95-47-6	o-Xylene	17	U	17	2.3
99-87-6	p-Isopropyltoluene	17	U	17	2.0
135-98-8	sec-Butylbenzene	17	U	17	2.2
100-42-5	Styrene	17	U	17	1.8
994-05-8	Tert-amyl-methyl ether (TAME)	83	U	83	1.1
75-65-0	tert-Butyl alcohol	330	U *	330	65
98-06-6	tert-Butylbenzene	17	U	17	2.2
630-20-6	1,1,1,2-Tetrachloroethane	17	U	17	3.8
79-34-5	1,1,2,2-Tetrachloroethane	17	U	17	3.0
127-18-4	Tetrachloroethene	6.7	J	17	4.8
108-88-3	Toluene	17	U	17	2.2
156-60-5	trans-1,2-Dichloroethene	17	U	17	3.2
10061-02-6	trans-1,3-Dichloropropene	17	U	17	3.2
87-61-6	1,2,3-Trichlorobenzene	17	U	17	2.8
120-82-1	1,2,4-Trichlorobenzene	17	U	17	2.5
71-55-6	1,1,1-Trichloroethane	60		17	3.7
79-01-6	Trichloroethene	530		17	2.8
75-69-4	Trichlorofluoromethane	17	U	17	3.5
96-18-4	1,2,3-Trichloropropane	17	U	17	7.2
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	17	U	17	4.7
526-73-8	1,2,3-Trimethylbenzene	83	U	83	0.098
95-63-6	1,2,4-Trimethylbenzene	17	U	17	2.0
108-05-4	Vinyl acetate	33	U	33	3.2
75-01-4	Vinyl chloride	17	U	17	3.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98B-042913 | Lab Sample ID: 240-23812-4

Matrix: Water | Lab File ID: UXJ1434.D

Analysis Method: 8260B | Date Collected: 04/29/2013 14:20

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:36

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	33	U	33	4.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	91		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
2037-26-5	Toluene-d8 (Surr)	92		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98B-042913 Lab Sample ID: 240-23812-4

Matrix: Water Lab File ID: UXJ1434.D

Analysis Method: 8260B Date Collected: 04/29/2013 14:20

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:36

Soil Aliquot Vol: Dilution Factor: 16.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: TB-042913 | Lab Sample ID: 240-23812-1

Matrix: WQ | Lab File ID: UXJ1431.D

Analysis Method: 8260B | Date Collected: 04/29/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 13:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: TB-042913 Lab Sample ID: 240-23812-1

Matrix: WQ Lab File ID: UXJ1431.D

Analysis Method: 8260B Date Collected: 04/29/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 13:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: TB-042913 Lab Sample ID: 240-23812-1

Matrix: WQ Lab File ID: UXJ1431.D

Analysis Method: 8260B Date Collected: 04/29/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 13:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: TB-042913 Lab Sample ID: 240-23812-1

Matrix: WQ Lab File ID: UXJ1431.D

Analysis Method: 8260B Date Collected: 04/29/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 13:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.04	3.2	T J N

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111A-042913 | Lab Sample ID: 240-23812-6

Matrix: Water | Lab File ID: 0507025.D

Analysis Method: 8270D | Date Collected: 04/29/2013 13:51

Extract. Method: 3520C | Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1050(mL) | Date Analyzed: 05/07/2013 15:56

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 84912 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.68	J	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	66		20-110
367-12-4	2-Fluorophenol (Surr)	63		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	79		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	62		21-110
4165-62-2	Phenol-d5 (Surr)	66		21-110
1718-51-0	Terphenyl-d14 (Surr)	50		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-111B-042913 | Lab Sample ID: 240-23812-7

Matrix: Water | Lab File ID: 0508027.D

Analysis Method: 8270D | Date Collected: 04/29/2013 15:10

Extract. Method: 3520C | Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1020(mL) | Date Analyzed: 05/08/2013 21:05

Con. Extract Vol.: 2(mL) | Dilution Factor: 2

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85157 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	84		2.0	0.96

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	66		20-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	61		21-110
1718-51-0	Terphenyl-d14 (Surr)	50		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW41A-042913 Lab Sample ID: 240-23812-2

Matrix: Water Lab File ID: 0507021.D

Analysis Method: 8270D Date Collected: 04/29/2013 10:40

Extract. Method: 3520C Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1000(mL) Date Analyzed: 05/07/2013 14:28

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 84912 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	67		20-110
367-12-4	2-Fluorophenol (Surr)	65		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	83		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	63		21-110
4165-62-2	Phenol-d5 (Surr)	66		21-110
1718-51-0	Terphenyl-d14 (Surr)	48		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98A-042913 | Lab Sample ID: 240-23812-3

Matrix: Water | Lab File ID: 0507022.D

Analysis Method: 8270D | Date Collected: 04/29/2013 12:25

Extract. Method: 3520C | Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1040(mL) | Date Analyzed: 05/07/2013 14:50

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 84912 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	2.5		0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	73		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	58		21-110
4165-62-2	Phenol-d5 (Surr)	59		21-110
1718-51-0	Terphenyl-d14 (Surr)	47		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98B-042913 | Lab Sample ID: 240-23812-4

Matrix: Water | Lab File ID: 0508007.D

Analysis Method: 8270D | Date Collected: 04/29/2013 14:20

Extract. Method: 3520C | Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1010(mL) | Date Analyzed: 05/08/2013 13:46

Con. Extract Vol.: 2(mL) | Dilution Factor: 4

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85157 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	120		4.0	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	71		20-110
367-12-4	2-Fluorophenol (Surr)	64		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	67		21-110
1718-51-0	Terphenyl-d14 (Surr)	59		24-110

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Matrix: Water Lab File ID: Z0050107.D

Analysis Method: RSK-175 Date Collected: 04/29/2013 11:03

Sample wt/vol: 17(mL) Date Analyzed: 05/01/2013 11:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 84221 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	13		0.50	0.37
74-84-0	Ethane	31		0.50	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	109		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Matrix: Water Lab File ID: Z0050206.D

Analysis Method: RSK-175 Date Collected: 04/29/2013 11:03

Sample wt/vol: 17(mL) Date Analyzed: 05/02/2013 09:30

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 84393 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	4800	B	5.0	0.98

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	105		40-122

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW41A-042913 Lab Sample ID: 240-23812-2

Matrix: Water Lab File ID: 09MAY13-Perc-019.d

Analysis Method: 6850 Date Collected: 04/29/2013 10:40

Extraction Method: Filtration Date Extracted: 05/08/2013 10:53

Sample wt/vol: 4.00(mL) Date Analyzed: 05/09/2013 20:07

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 16094 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-111B-042913 Lab Sample ID: 240-23812-7

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 15:10

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	4.1	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	0.34	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	73	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	84	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	47	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	59	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-111B-042913 Lab Sample ID: 240-23812-7

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 15:10

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 11:03

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	3.1	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	160	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.0	2.0	0.50	ug/L	U		1	6020
7440-02-0	Nickel	63	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	100	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	60	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 11:03

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	1600	5000	130	ug/L	J	B	1	6010C
7439-89-6	Iron	31000	200	81	ug/L			1	6010C
7440-09-7	Potassium	420	5000	72	ug/L	J		1	6010C
7439-95-4	Magnesium	11000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	9700	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	28000	5000	590	ug/L			1	6010C
14808-60-7	SiO2, Silica	12000	5400	70	ug/L			5	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 11:03

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW41A-042913 Lab Sample ID: 240-23812-2

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 10:40

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	0.98	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	610	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	1.2	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	400	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.53	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	550	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	39	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.26	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW41A-042913 Lab Sample ID: 240-23812-2

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 10:40

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW98A-042913 Lab Sample ID: 240-23812-3

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 12:25

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	45	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	9.4	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	1.4	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	2.1	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.64	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	2.1	5.0	0.50	ug/L	J		1	6020
7440-48-4	Cobalt	0.80	1.0	0.10	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	20	20	4.0	ug/L	U		1	6020
7439-98-7	Molybdenum	0.89	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	1.8	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW98A-042913 Lab Sample ID: 240-23812-3

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 12:25

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW98B-042913 Lab Sample ID: 240-23812-4

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 14:20

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.43	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	13	1.0	0.10	ug/L			1	6020
7440-43-9	Cadmium	0.21	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	42	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	2.6	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	140	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.93	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	86	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	220	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW98B-042913 Lab Sample ID: 240-23812-4

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 14:20

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 11:03

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	60	5.0	2.7	mg/L			1	310.1
	Total Dissolved Solids	190	10	7.4	mg/L			1	160.1
16887-00-6	Chloride	73	1.0	0.10	mg/L		B	1	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.10	0.10	0.023	mg/L	U		1	300.0
14808-79-8	Sulfate	6.6	1.0	0.12	mg/L			1	300.0
	Orthophosphate as P	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	0.046	0.20	0.035	mg/L	J	B	1	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG ID.:

Matrix: Water Date Sampled: 04/29/2013 11:03

Reporting Basis: WET Date Received: 04/30/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	3.8	1.0	0.24	mg/L			1	9060

Appendix C

Support Documentation

HOLDTIME

SDG 240-23812-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/16/2013	5/16/2013	15	0	15
HG	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
HG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/3/2013	5/6/2013	4	3	7
HG	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
HG	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/6/2013	2	5	7
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/2/2013	2	1	3
M	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/9/2013	5/9/2013	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
ALK	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
CL	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
DOC	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
NH3	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
NTA	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
NTI	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
OPO4	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
PCL	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/8/2013	5/9/2013	9	1	10
PCS	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
SO4	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
OS	UG/L	MRC-MW100A-043013	240-23844-2	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-MW-111A-042913	240-23812-6	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/3/2013	5/8/2013	4	5	9
OS	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/6/2013	5/9/2013	6	3	9
OS	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/3/2013	5/8/2013	4	5	9
OS	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-OF-06A-050113	240-23909-8	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-06B-050113	240-23909-6	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-06C-050113	240-23909-7	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF07-043013	240-23844-4	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-OF08A-050113	240-23909-1	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08B-050113	240-23909-3	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08C-050113	240-23909-4	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08D-050113	240-23909-5	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/6/2013	5/21/2013	6	15	21
OS	UG/L	MRC-OF04B-050713	240-24312-1	NM	5/9/2013	5/16/2013	5/18/2013	7	2	9
OV	UG/L	TB-050113	240-23909-2	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF07-043013	240-23844-4	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-OF08A-050113	240-23909-1	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF08B-050113	240-23909-3	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF08C-050113	240-23909-4	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF08D-050113	240-23909-5	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF-06C-050113	240-23909-7	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	TB-043013	240-23844-1	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9
OV	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9
OV	UG/L	TB-042913	240-23812-1	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-111A-042913	240-23812-6	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW100A-043013	240-23844-2	NM	4/30/2013	5/14/2013	5/14/2013	14	0	14
OV	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/13/2013	5/13/2013	13	0	13
OV	UG/L	MRC-OF-06B-050113	240-23909-6	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-OF-06A-050113	240-23909-8	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
ETHA	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
ETHE	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
METH	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
OVG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
OVG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-23812-1

Job Description: MRC 2013 GW SAMPLING, MD

For:
Tetra Tech, Inc
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Tony Apanavage

Approved for release.
John McFadden
Project Manager I
5/22/2013 10:30 AM

John McFadden, Project Manager I
4101 Shuffel Street NW, North Canton, OH, 44720
john.mcfadden@testamericainc.com
05/22/2013

cc: Samantha Brenner
Vanessa Good
Mike Martin
Dev Murali
Tobrena Sedlmyer
Final Data Tracking

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F	MS or MSD exceeds the control limits

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value

LCMS

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
F	MS or MSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC 2013 GW SAMPLING, MD

Report Number: 240-23812-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and the 7470A Mercury analyses were performed at the TestAmerica Irvine laboratory. The 6850 Perchlorate analysis was performed at the TestAmerica Sacramento laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 04/30/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 3.1 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-042913 (240-23812-1), MRC-MW41A-042913 (240-23812-2), MRC-MW98A-042913 (240-23812-3), MRC-MW98B-042913 (240-23812-4), MRC-MW-48A-042913 (240-23812-5), MRC-MW-111A-042913 (240-23812-6) and MRC-MW-111B-042913 (240-23812-7) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/09/2013.

tert-Butyl alcohol failed the recovery criteria high for LCS 240-85269/4.

Samples MRC-MW98B-042913 (240-23812-4)[16.67X], MRC-MW-48A-042913 (240-23812-5)[25X] and MRC-MW-111B-042913 (240-23812-7)[14.29X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 85269 recovered outside control limits for the following analyte(s): 2-Methyl-2-Propanol. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW41A-042913 (240-23812-2), MRC-MW98A-042913 (240-23812-3), MRC-MW98B-042913 (240-23812-4), MRC-MW-111A-042913 (240-23812-6) and MRC-MW-111B-042913 (240-23812-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 05/03/2013 and analyzed on 05/07/2013 and 05/08/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Samples MRC-MW98B-042913 (240-23812-4)[4X] and MRC-MW-111B-042913 (240-23812-7)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES
Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 05/01/2013 and 05/02/2013.

Methane was detected in method blank MB 240-84393/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW-48A-042913 (240-23812-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 240-84221.

No other difficulties were encountered during the dissolved gases analysis. All other quality control parameters were within the acceptance limits.

PERCHLORATE
Sample MRC-MW41A-042913 (240-23812-2) was analyzed for Perchlorate in accordance with EPA SW846 Method 6850. The samples were prepared on 05/08/2013 and analyzed on 05/09/2013.

No difficulties were encountered during the perchlorate analysis. All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 05/01/2013 and analyzed on 05/02/2013 and 05/06/2013.

Calcium, Magnesium and Manganese were detected in method blank MB 240-84271/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Iron, Manganese and SiO2, Silica failed the recovery criteria low for the MS of sample MRC-MW-48A-042913MS (240-23812-5) in batch 240-84919.

Sample MRC-MW-48A-042913 (240-23812-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MRC-MW41A-042913 (240-23812-2), MRC-MW98A-042913 (240-23812-3), MRC-MW98B-042913 (240-23812-4), MRC-MW-48A-042913 (240-23812-5) and MRC-MW-111B-042913 (240-23812-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared and analyzed on 05/08/2013.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MRC-MW41A-042913 (240-23812-2), MRC-MW98A-042913 (240-23812-3), MRC-MW98B-042913 (240-23812-4), MRC-MW-48A-042913 (240-23812-5) and MRC-MW-111B-042913 (240-23812-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/03/2013 and 05/16/2013 and analyzed on 05/06/2013 and 05/16/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 05/02/2013.

No difficulties were encountered during the TDS analysis. All quality control parameters were within the acceptance limits.

ANIONS
Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 04/30/2013.

Orthophosphate as P failed the recovery criteria low for the MS of sample MRC-MW-48A-042913MS (240-23812-5) in batch 240-84229.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ANIONS

Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 05/06/2013.

Chloride was detected in method blank MB 240-84749/3 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the anions analysis. All other quality control parameters were within the acceptance limits.

ALKALINITY

Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 05/06/2013.

No difficulties were encountered during the alkalinity analysis. All quality control parameters were within the acceptance limits.

AMMONIA

Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 05/02/2013.

Ammonia (as N) was detected in method blank MB 240-84533/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the ammonia analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Sample MRC-MW-48A-042913 (240-23812-5) was analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 05/01/2013.

No difficulties were encountered during the TOC analysis. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: MRC 2013 GW SAMPLING, MD

TestAmerica Job ID: 240-23812-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
RSK-175	Dissolved Gases (GC)	RSK	TAL CAN
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
6010C	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL IRV
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
310.1	Alkalinity	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9060	Organic Carbon, Dissolved (DOC)	SW846	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Tetra Tech, Inc
Project/Site: MRC 2013 GW SAMPLING, MD

TestAmerica Job ID: 240-23812-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-23812-1	TB-042913	WQ	04/29/13 00:00	04/30/13 10:30
240-23812-2	MRC-MW41A-042913	Water	04/29/13 10:40	04/30/13 10:30
240-23812-3	MRC-MW98A-042913	Water	04/29/13 12:25	04/30/13 10:30
240-23812-4	MRC-MW98B-042913	Water	04/29/13 14:20	04/30/13 10:30
240-23812-5	MRC-MW-48A-042913	Water	04/29/13 11:03	04/30/13 10:30
240-23812-6	MRC-MW-111A-042913	Water	04/29/13 13:51	04/30/13 10:30
240-23812-7	MRC-MW-111B-042913	Water	04/29/13 15:10	04/30/13 10:30

Detection Limit Exceptions Summary

Client: Tetra Tech, Inc
Project/Site: MRC 2013 GW SAMPLING, MD

TestAmerica Job ID: 240-23812-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260B	WQ	2-Butanone	ug/L	5.0	10
8260B	WQ	2-Hexanone	ug/L	5.0	10
8260B	WQ	4-Methyl-2-pentanone	ug/L	5.0	10
8260B	WQ	Acetone	ug/L	5.0	10
8260B	WQ	Diisopropyl ether	ug/L	5.0	10
8260B	WQ	tert-Butyl alcohol	ug/L	20	50

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: Tetra Tech	Project Manager: Tony Apacinage	Date: 4/29/13	Chain of Custody Number: 114461
Address: 20251 Century Blvd Ste 200	Telephone Number (Area Code)/Fax Number: (301)528-5552	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Stu Cameron	Lab Contact: Pat O'Meara	
Project Name and Location (State): MRC 2013 GW Sampling, MD	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112IC04795-02			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	VOCs	Total Metals	1,4-Dioxane	Perchlorate	MEE	DOC	NH3-N	Alk, TDS, Anions	Fe, Mn, Ca Mg, K, Na, Sr	Special Instructions/ Conditions of Receipt
TB-042913	—	—		X						2			X									
MRC-MW41A-042913	4/29/13	1040		X			3		1	3			X	X	X	X						
MRC-MW98A-042913		1225		X			2		1	3			X	X	X							
MRC-MW98B-042913		1420		X			2		1	3			X	X	X							
MRC-MW-48A-042913		1103		X			X	X	X	X			X	X			X	X	X	X	X	X
MRC-MW-111A-042913		1351		X			2			3			X		X							
MRC-MW-111B-042913		1510		X			2		1	3			X	X	X							

240-23812 Chain of Custody

Page 2337 of 2341

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/29/13	1600	1. Received By	4/29/13	1600
2. Relinquished By	4-29-2013	1645	2. Received By	4/30/13	1030
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 23812
Canton Facility

Client TETRA TECH Site Name _____ Cooler unpacked by:

Cooler Received on 4-30-13 Opened on 4-30-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # 206263 Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF –0 °C)	Observed Cooler Temp. 3.4 °C	Corrected Cooler Temp. 3.4 °C	
IR GUN# 4G	(CF +1 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	☐ See Multiple Cooler Form
IR GUN# 5G	(CF +1 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 8	(CF +1 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____	Yes (No)	
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes No (NA)	
-Were custody seals on the bottle(s)?	Yes (No)	
3. Shippers' packing slip attached to the cooler(s)?	(Yes) No	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
7. Could all bottle labels be reconciled with the COC?	(Yes) No	
8. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
9. Sufficient quantity received to perform indicated analyses?	(Yes) No	
10. Were sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC379740
11. Were VOAs on the COC?	(Yes) No	
12. Were air bubbles >6 mm in any VOA vials?	Yes (No) NA	
13. Was a trip blank present in the cooler(s)?	(Yes) No	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: Perry Burns

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW41A-042913	240-23812-E-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW98A-042913	240-23812-D-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW98B-042913	240-23812-D-4	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW-48A-042913	240-23812-H-5	Plastic 250ml - with Sulfuric Acid	<2	_____	_____
MRC-MW-48A-042913	240-23812-I-5	Plastic 250ml - with Nitric Acid	<2	_____	_____
MRC-MW-48A-042913	240-23812-J-5	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW-111B-042913	240-23812-D-7	Plastic 500ml - with Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23812-1

Login Number: 23812
List Number: 1
Creator: Avila, Stephanie

List Source: TestAmerica Irvine
List Creation: 05/01/13 09:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23812-1

Login Number: 23812
List Number: 1
Creator: Mantri, Anil

List Source: TestAmerica Sacramento
List Creation: 05/02/13 04:17 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	
Cooler Temperature is recorded.	True	-0.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042913	240-23812-1	89	88	88	85
MRC-MW41A-042913	240-23812-2	90	89	91	95
MRC-MW98A-042913	240-23812-3	89	89	88	86
MRC-MW98B-042913	240-23812-4	91	92	92	88
MRC-MW-48A-042913	240-23812-5	90	90	92	86
MRC-MW-111A-042913	240-23812-6	90	89	90	85
MRC-MW-111B-042913	240-23812-7	90	87	88	85
	MB 240-85269/5	89	89	91	90
	LCS 240-85269/4	87	84	93	95
MRC-MW98B-042913 MS	240-23812-4 MS	86	87	89	100
MRC-MW98B-042913 MSD	240-23812-4 MSD	87	81	90	105

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: A3UX11 Start Date: 05/07/2013 10:37

Analysis Batch Number: 84966 End Date: 05/07/2013 15:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-84966/1		05/07/2013 10:37	1	BFB116C.D	DB-624 0.18(mm)
STD8260 240-84966/2 IC		05/07/2013 11:08	1	UXJ1361.D	DB-624 0.18(mm)
STD8260 240-84966/3 IC		05/07/2013 11:31	1	UXJ1362.D	DB-624 0.18(mm)
STD8260 240-84966/4 ICIS		05/07/2013 11:53	1	UXJ1363.D	DB-624 0.18(mm)
STD8260 240-84966/5 IC		05/07/2013 12:16	1	UXJ1364.D	DB-624 0.18(mm)
STD8260 240-84966/6 IC		05/07/2013 12:39	1	UXJ1365.D	DB-624 0.18(mm)
STD8260 240-84966/7 IC		05/07/2013 13:02	1	UXJ1366.D	DB-624 0.18(mm)
STD6 240-84966/8 IC		05/07/2013 13:24	1	UXJ1367.D	DB-624 0.18(mm)
STD5 240-84966/9 IC		05/07/2013 13:47	1	UXJ1368.D	DB-624 0.18(mm)
STD4 240-84966/10 IC		05/07/2013 14:09	1	UXJ1369.D	DB-624 0.18(mm)
STD3 240-84966/11 IC		05/07/2013 14:32	1	UXJ1370.D	DB-624 0.18(mm)
STD2 240-84966/12 IC		05/07/2013 14:55	1	UXJ1371.D	DB-624 0.18(mm)
STD1 240-84966/13 IC		05/07/2013 15:18	1	UXJ1372.D	DB-624 0.18(mm)
ICV 240-84966/14		05/07/2013 15:40	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: BFB116C.D BFB Injection Date: 05/07/2013

Instrument ID: A3UX11 BFB Injection Time: 10:37

Analysis Batch No.: 84966

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	43.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	85.8	
175	5.0 - 9.0 % of mass 174	6.5	(7.5)1
176	95.0 - 101.0 % of mass 174	83.2	(97.0)1
177	5.0 - 9.0 % of mass 176	5.4	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-84966/2	UXJ1361.D	05/07/2013	11:08
	STD8260 240-84966/3	UXJ1362.D	05/07/2013	11:31
	STD8260 240-84966/4	UXJ1363.D	05/07/2013	11:53
	STD8260 240-84966/5	UXJ1364.D	05/07/2013	12:16
	STD8260 240-84966/6	UXJ1365.D	05/07/2013	12:39
	STD8260 240-84966/7	UXJ1366.D	05/07/2013	13:02
	STD6 240-84966/8	UXJ1367.D	05/07/2013	13:24
	STD5 240-84966/9	UXJ1368.D	05/07/2013	13:47
	STD4 240-84966/10	UXJ1369.D	05/07/2013	14:09
	STD3 240-84966/11	UXJ1370.D	05/07/2013	14:32
	STD2 240-84966/12	UXJ1371.D	05/07/2013	14:55
	STD1 240-84966/13	UXJ1372.D	05/07/2013	15:18

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-84966/7	UXJ1366.D
Level 2	STD8260 240-84966/6	UXJ1365.D
Level 3	STD8260 240-84966/5	UXJ1364.D
Level 4	STD8260 240-84966/4	UXJ1363.D
Level 5	STD8260 240-84966/3	UXJ1362.D
Level 6	STD8260 240-84966/2	UXJ1361.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1594 0.1602	0.1382	0.1559	0.1537	0.1575	Ave		0.1541				5.3		15.0			
Chloromethane	0.2084 0.1901	0.1850	0.2035	0.1951	0.1989	Ave		0.1968			0.1000	4.4		15.0			
Vinyl chloride	0.1998 0.1726	0.1747	0.1770	0.1846	0.1782	Ave		0.1812				5.5		15.0			
Bromomethane	0.0701 0.0811	0.0651	0.0745	0.0786	0.0793	Ave		0.0748				8.3		15.0			
Chloroethane	0.0841 0.0945	0.0773	0.0871	0.0914	0.0920	Ave		0.0878				7.2		15.0			
Trichlorofluoromethane	0.1798 0.2000	0.1574	0.1753	0.1796	0.1988	Ave		0.1818				8.7		15.0			
Acrolein	0.0279 0.0329	0.0281	0.0289	0.0298	0.0320	Ave		0.0300				7.0		15.0			
1,1-Dichloroethene	0.2134 0.1944	0.2010	0.1964	0.2093	0.2109	Ave		0.2042				3.9		15.0			
Acetone	0.0757 0.0416	0.0530	0.0428	0.0381	0.0419	Lin1	0.0578	0.0398							0.9960		0.9900
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.0776 0.1162	0.0881	0.0971	0.1008	0.1108	Ave		0.0984				14.0		15.0			
Iodomethane	0.3085 0.2333	0.2934	0.2759	0.2766	0.2610	Ave		0.2748				9.5		15.0			
Carbon disulfide	0.5679 0.5301	0.5621	0.5547	0.5565	0.5696	Ave		0.5568				2.6		15.0			
Acetonitrile	0.0110 0.0106	0.0085	0.0089	0.0103	0.0099	Ave		0.0099				10.0		15.0			
Methyl acetate	0.1466 0.1378	0.1468	0.1438	0.1345	0.1419	Ave		0.1419				3.5		15.0			
Methylene Chloride	0.4091 0.2347	0.3351	0.2678	0.2619	0.2445	Lin1	0.1891	0.2331							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0081 0.0080	0.0062	0.0070	0.0074	0.0086	Ave		0.0075				12.0		15.0			
Acrylonitrile	0.0710 0.0732	0.0656	0.0681	0.0651	0.0724	Ave		0.0692				5.0		15.0			
trans-1,2-Dichloroethene	0.3547 0.3309	0.3417	0.3402	0.3473	0.3398	Ave		0.3424				2.3		15.0			
Methyl tert-butyl ether	0.7064 0.7026	0.6872	0.6976	0.6815	0.7294	Ave		0.7008				2.4		15.0			
Hexane	0.0578 0.0693	0.0648	0.0554	0.0622	0.0652	Ave		0.0625				8.2		15.0			
1,1-Dichloroethane	0.5417 0.5102	0.5279	0.5289	0.5417	0.5349	Ave		0.5309			0.1000	2.2		15.0			
Vinyl acetate	0.0464 0.0630	0.0502	0.0632	0.0618	0.0652	Ave		0.0583				14.0		15.0			
cis-1,2-Dichloroethene	0.3444 0.3515	0.3369	0.3527	0.3561	0.3567	Ave		0.3497				2.2		15.0			
2-Butanone	0.0766 0.0682	0.0703	0.0670	0.0642	0.0734	Ave		0.0699				6.4		15.0			
2,2-Dichloropropane	0.2813 0.2229	0.2664	0.2506	0.2527	0.2487	Ave		0.2538				7.7		15.0			
Bromochloromethane	0.1727 0.1665	0.1705	0.1698	0.1762	0.1693	Ave		0.1708				1.9		15.0			
Tetrahydrofuran	0.0433 0.0462	0.0454	0.0457	0.0427	0.0487	Ave		0.0453				4.7		15.0			
Chloroform	0.5802 0.5137	0.5328	0.5221	0.5324	0.5277	Ave		0.5348				4.4		15.0			
1,1,1-Trichloroethane	0.3414 0.3292	0.3788	0.3628	0.3707	0.3751	Ave		0.3597				5.6		15.0			
Cyclohexane	0.2947 0.3499	0.3345	0.3206	0.3524	0.3596	Ave		0.3353				7.3		15.0			
1,1-Dichloropropene	0.4105 0.4122	0.4054	0.4051	0.4307	0.4201	Ave		0.4140				2.4		15.0			
Carbon tetrachloride	0.3227 0.3117	0.3226	0.3234	0.3348	0.3379	Ave		0.3255				2.9		15.0			
1,2-Dichloroethane	0.3466 0.3333	0.3489	0.3388	0.3453	0.3503	Ave		0.3439				1.9		15.0			
Benzene	1.3663 1.3032	1.3137	1.3101	1.3380	1.3319	Ave		1.3272				1.8		15.0			
Trichloroethene	0.3613 0.3346	0.3495	0.3356	0.3442	0.3503	Ave		0.3459				2.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3209 0.3941	0.3586	0.3555	0.3742	0.3821	Ave		0.3642				7.0		15.0			
1,2-Dichloropropane	0.3115 0.2872	0.2878	0.2983	0.2959	0.2965	Ave		0.2962				3.0		15.0			
Dibromomethane	0.1538 0.1566	0.1554	0.1624	0.1591	0.1672	Ave		0.1591				3.1		15.0			
1,4-Dioxane	0.0003 0.0010	0.0006	0.0005	0.0009	0.0011	Qua	-0.088	0.0012	0						0.9950		0.9900
Bromodichloromethane	0.3746 0.3652	0.3424	0.3555	0.3716	0.3782	Ave		0.3646				3.7		15.0			
2-Chloroethyl vinyl ether	0.1418 0.1511	0.1451	0.1495	0.1509	0.1586	Ave		0.1495				3.9		15.0			
cis-1,3-Dichloropropene	0.4421 0.4530	0.3992	0.4302	0.4529	0.4664	Ave		0.4406				5.4		15.0			
4-Methyl-2-pentanone	0.1248 0.1377	0.1501	0.1445	0.1392	0.1492	Ave		0.1409				6.6		15.0			
Toluene	2.3527 2.3846	2.2832	2.2039	2.3199	2.3763	Ave		2.3201				2.9		15.0			
trans-1,3-Dichloropropene	0.5628 0.6519	0.5152	0.5832	0.6114	0.6425	Ave		0.5945				8.7		15.0			
Ethyl methacrylate	0.5059 0.5423	0.4635	0.4659	0.5103	0.5586	Ave		0.5077				7.6		15.0			
1,1,2-Trichloroethane	0.4308 0.3800	0.3729	0.3908	0.3744	0.3876	Ave		0.3894				5.5		15.0			
1,3-Dichloropropane	0.6847 0.6793	0.6632	0.6831	0.6615	0.7060	Ave		0.6796				2.4		15.0			
Tetrachloroethene	0.4364 0.4124	0.3930	0.4045	0.4251	0.4178	Ave		0.4149				3.7		15.0			
2-Hexanone	0.1245 0.1367	0.1252	0.1327	0.1336	0.1451	Ave		0.1330				5.8		15.0			
Dibromochloromethane	0.3751 0.4113	0.3616	0.3714	0.3891	0.4155	Ave		0.3873				5.7		15.0			
1,2-Dibromoethane	0.3574 0.3461	0.3364	0.3500	0.3368	0.3641	Ave		0.3484				3.2		15.0			
Chlorobenzene	1.2018 1.1290	1.1570	1.1160	1.1577	1.1616	Ave		1.1539			0.3000	2.6		15.0			
1,1,1,2-Tetrachloroethane	0.3714 0.3729	0.3983	0.3665	0.3841	0.3897	Ave		0.3805				3.2		15.0			
Ethylbenzene	0.6063 0.5970	0.5723	0.6055	0.6078	0.6221	Ave		0.6018				2.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.7095 0.6962	0.6637	0.7011	0.7196	0.7145	Ave		0.7008				2.9		15.0			
o-Xylene	0.5717 0.5696	0.5580	0.5798	0.6022	0.5956	Ave		0.5795				2.9		15.0			
Styrene	0.8873 0.9777	0.8906	0.9138	1.0014	0.9946	Ave		0.9442				5.6		15.0			
Bromoform	0.1540 0.1592	0.1371	0.1517	0.1455	0.1624	Ave		0.1517			0.1000	6.1		15.0			
Isopropylbenzene	1.2008 1.1945	1.2329	1.2417	1.2516	1.2545	Ave		1.2293				2.1		15.0			
1,1,2,2-Tetrachloroethane	0.8210 0.6824	0.7953	0.7750	0.7286	0.7553	Ave		0.7596			0.3000	6.5		15.0			
Bromobenzene	0.9775 0.9126	0.9925	0.9681	0.9698	0.9573	Ave		0.9629				2.8		15.0			
1,2,3-Trichloropropane	0.2273 0.2187	0.2627	0.2438	0.2307	0.2327	Ave		0.2360				6.5		15.0			
trans-1,4-Dichloro-2-butene	0.1251 0.1602	0.0998	0.1146	0.1231	0.1469	Lin1	-0.080	0.1533							0.9900		0.9900
n-Propylbenzene	0.8717 0.8621	0.9261	0.9105	0.8937	0.8835	Ave		0.8913				2.7		15.0			
2-Chlorotoluene	0.7445 0.7911	0.8189	0.8574	0.8029	0.8252	Ave		0.8067				4.7		15.0			
1,3,5-Trimethylbenzene	2.2090 2.4156	2.3590	2.3941	2.4473	2.4416	Ave		2.3778				3.7		15.0			
4-Chlorotoluene	0.8727 0.8653	0.8480	0.8323	0.8504	0.8523	Ave		0.8535				1.7		15.0			
tert-Butylbenzene	1.9177 1.9040	1.9276	1.9642	2.0063	1.9720	Ave		1.9486				2.0		15.0			
1,2,4-Trimethylbenzene	2.0676 2.5147	2.3612	2.4648	2.4931	2.5213	Ave		2.4038				7.3		15.0			
sec-Butylbenzene	2.5956 2.6889	2.6429	2.6989	2.7630	2.6956	Ave		2.6808				2.1		15.0			
1,3-Dichlorobenzene	1.6779 1.5722	1.7106	1.6595	1.5951	1.5965	Ave		1.6353				3.4		15.0			
p-Isopropyltoluene	2.0328 2.3657	2.1283	2.2254	2.3675	2.3779	Ave		2.2496				6.5		15.0			
1,4-Dichlorobenzene	1.8517 1.6012	1.6914	1.7081	1.6602	1.6539	Ave		1.6944				5.0		15.0			
n-Butylbenzene	1.9209 2.0336	1.8826	1.9205	1.9816	2.0254	Ave		1.9607				3.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.6836 1.4030	1.5884	1.6015	1.5413	1.5206	Ave		1.5564				6.0		15.0			
1,2-Dibromo-3-Chloropropane	0.1128 0.0908	0.1357	0.1313	0.1164	0.1219	Ave		0.1181				14.0		15.0			
1,3,5-Trichlorobenzene	1.1052 0.7377	0.9154	1.0056	0.8781	0.8666	Ave		0.9181				14.0		15.0			
1,2,4-Trichlorobenzene	0.9492 0.5449	0.8060	0.7680	0.7215	0.6898	Qua	0.0034	0.8134	-0.007						1.0000		0.9900
Hexachlorobutadiene	0.4030 0.2205	0.3998	0.3727	0.3439	0.2850	Qua	0.1310	0.3514	-0.003						0.9990		0.9900
Naphthalene	1.9695 0.9187	1.9413	1.8223	1.6812	1.5463	Qua	-0.506	2.1299	-0.030						0.9980		0.9900
1,2,3-Trichlorobenzene	0.7440 0.3425	0.8069	0.7154	0.6312	0.5615	Qua	0.0096	0.7620	-0.010						0.9990		0.9900
Dibromofluoromethane (Surr)	0.3045 0.2775	0.2562	0.3032	0.2901	0.2781	Ave		0.2849				6.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3130 0.2726	0.2793	0.3123	0.2975	0.2759	Ave		0.2918				6.3		15.0			
Toluene-d8 (Surr)	1.9011 1.9630	1.7705	1.9081	1.9229	1.9086	Ave		1.8957				3.4		15.0			
4-Bromofluorobenzene (Surr)	0.3320 0.3286	0.3113	0.3348	0.3324	0.3316	Ave		0.3284				2.6		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-84966/7	UXJ1366.D
Level 2	STD8260 240-84966/6	UXJ1365.D
Level 3	STD8260 240-84966/5	UXJ1364.D
Level 4	STD8260 240-84966/4	UXJ1363.D
Level 5	STD8260 240-84966/3	UXJ1362.D
Level 6	STD8260 240-84966/2	UXJ1361.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	21049 916922	36568	103829	206221	436990	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	27529 1088047	48970	135540	261714	551925	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	26388 987608	46237	117893	247673	494497	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	9258 463945	17232	49584	105489	220082	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	11112 540802	20474	58035	122682	255261	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	23743 1144575	41671	116731	241002	551529	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	36907 1885646	74438	192419	400307	889181	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	28180 1112890	53209	130786	280814	585075	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	19985 476036	28050	56958	102264	232687	2.00 80.0	4.00	10.0	20.0	40.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	10247 664802	23315	64682	135226	307523	1.00 40.0	2.00	5.00	10.0	20.0
Iodomethane	FB	Ave	40748 1335216	77667	183751	371110	724052	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	75007 3034175	148778	369393	746611	1580317	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	14561 604904	22473	59113	138567	275852	10.0 400	20.0	50.0	100	200
Methyl acetate	FB	Ave	38719 1577046	77694	191583	360999	787526	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	54028 1343348	88701	178341	351344	678472	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	21298 916474	32736	92920	199041	479904	20.0 800	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	18760 837635	34751	90703	174595	401739	2.00 80.0	4.00	10.0	20.0	40.0
trans-1,2-Dichloroethene	FB	Ave	46842 1893659	90438	226550	465914	942748	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	93300 4021369	181902	464547	914322	2023878	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	7630 396868	17156	36883	83502	181029	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	71545 2919888	139739	352235	726705	1484017	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	6133 360588	13297	42063	82908	180847	1.00 40.0	2.00	5.00	10.0	20.0
cis-1,2-Dichloroethene	FB	Ave	45491 2011578	89172	234874	477783	989827	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	20222 780254	37215	89201	172293	407280	2.00 80.0	4.00	10.0	20.0	40.0
2,2-Dichloropropane	FB	Ave	37153 1275670	70525	166886	338995	689923	1.00 40.0	2.00	5.00	10.0	20.0
Bromochloromethane	FB	Ave	22807 952963	45123	113073	236352	469830	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	5722 264677	12023	30404	57313	135112	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	76628 2939975	141027	347711	714218	1464085	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	45090 1884025	100258	241605	497340	1040869	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	38915 2002792	88552	213503	472779	997753	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	54211 2359030	107319	269758	577868	1165702	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	42613 1783798	85388	215359	449132	937519	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	45774 1907547	92350	225610	463214	971901	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	180451 7458802	347725	872458	1795108	3695368	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	47718 1915239	92510	223461	461813	971940	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	42386 2255471	94914	236745	501992	1060153	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	41137 1643968	76168	198674	397036	822725	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	20318 896021	41141	108123	213397	463891	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Qua	2239 273321	7977	17404	61257	149018	50.0 2000	100	250	500	1000
Bromodichloromethane	FB	Ave	49472 2090189	90627	236731	498573	1049265	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	37446 1729221	76840	199120	404862	880048	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Ave	58385 2592572	105658	286488	607605	1294197	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	32959 1576715	79477	192406	373551	827727	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	181218 7559267	358626	871203	1834205	3786980	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Ave	43350 2066564	80926	230524	483381	1023853	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Ave	38965 1719150	72804	184165	403440	890128	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	33183 1204633	58578	154473	296016	617700	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	52740 2153382	104168	270026	522971	1125149	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	33617 1307407	61728	159912	336064	665787	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	19174 866441	39342	104932	211226	462335	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Ave	28889 1303872	56801	146806	307602	662200	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	27532 1097005	52837	138343	266280	580166	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	92570 3578928	181740	441147	915343	1851111	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	28607 1182085	62556	144898	303650	620987	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	46700 1892460	89891	239345	480571	991439	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	109295 4413673	208493	554302	1137960	2277388	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	44034 1805739	87654	229193	476117	949092	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Ave	68345 3099327	139881	361244	791718	1584990	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Ave	11861 504812	21536	59979	115004	258845	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	92490 3786534	193651	490840	989564	1999198	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	19925 736809	38938	96989	188301	408225	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	23723 985280	48596	121152	250634	517418	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	5517 236127	12863	30509	59636	125765	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Lin1	3037 173005	4888	14341	31805	79393	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	21154 930751	45343	113953	230972	477568	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	18067 854168	40097	107304	207500	446058	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	53609 2608076	115499	299619	632507	1319742	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	21179 934302	41519	104160	219794	460668	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	46539 2055752	94377	245816	518519	1065886	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	50178 2715093	115608	308467	644353	1362775	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	62991 2903218	129401	337757	714111	1457002	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	40721 1697484	83754	207680	412264	862926	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	49333 2554239	104205	278500	611889	1285304	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	44939 1728753	82813	213761	429088	893945	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	46617 2195647	92174	240349	512142	1094733	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	40859 1514829	77769	200429	398356	821918	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	2738 98052	6642	16433	30089	65862	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	26822 796511	44821	125846	226941	468428	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Qua	23037 588330	39465	96115	186474	372849	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Qua	9780 238029	19576	46646	88890	154035	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCB	Qua	47797 991955	95051	228056	434503	835778	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Qua	18055 369742	39505	89535	163132	303520	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	40217 1588108	67802	201910	389158	771636	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	41340 1560246	73918	207951	399125	765379	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	146437 6222836	278089	754278	1520344	3041638	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	25575 1041519	48898	132349	262779	528408	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84966/13	UXJ1372.D
Level 2	STD2 240-84966/12	UXJ1371.D
Level 3	STD3 240-84966/11	UXJ1370.D
Level 4	STD4 240-84966/10	UXJ1369.D
Level 5	STD5 240-84966/9	UXJ1368.D
Level 6	STD6 240-84966/8	UXJ1367.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.2557 0.2421	0.2640	0.2436	0.2356	0.2527	Ave		0.2489				4.2		15.0			
Ethyl ether	0.2294 0.2336	0.2232	0.2405	0.2202	0.2323	Ave		0.2299				3.2		15.0			
3-Chloro-1-propene	0.1274 0.1699	0.1362	0.1536	0.1503	0.1672	Ave		0.1508				11.0		15.0			
Diisopropyl ether	0.2584 0.2886	0.2793	0.2775	0.2562	0.2878	Ave		0.2747				5.2		15.0			
2-Chloro-1,3-butadiene	0.3879 0.4311	0.4213	0.4144	0.4215	0.4360	Ave		0.4187				4.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.7067 0.7677	0.7770	0.7592	0.6807	0.7541	Ave		0.7409				5.2		15.0			
Propionitrile	0.0136 0.0182	0.0216	0.0151	0.0175	0.0170	Lin1	-0.004	0.0178							0.9950		0.9900
Ethyl acetate	0.1859 0.1658	0.1958	0.1667	0.1702	0.1583	Ave		0.1738				8.1		15.0			
Methacrylonitrile	0.1094 0.1081	0.1182	0.1115	0.1131	0.1094	Ave		0.1116				3.3		15.0			
Isobutyl alcohol	0.0045 0.0034	0.0051	0.0032	0.0039	0.0039	Qua	-0.020	0.0044	0						0.9980		0.9900
Tert-amyl-methyl ether (TAME)	0.6654 0.7215	0.6927	0.6904	0.6212	0.6894	Ave		0.6801				5.0		15.0			
n-Heptane	0.0524 0.0607	0.0477	0.0574	0.0816	0.0618	Qua	-0.022	0.0728	0						0.9930		0.9900
n-Butanol	0.0036 0.0036	0.0039	0.0034	0.0036	0.0031	Ave		0.0035				8.0		15.0			
Methyl methacrylate	0.1436 0.1616	0.1494	0.1536	0.1493	0.1580	Ave		0.1526				4.3		15.0			
2-Nitropropane	0.0371 0.0358	0.0403	0.0321	0.0343	0.0331	Ave		0.0355				8.4		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0661 0.0747	0.0849	0.0713	0.0708	0.0722	Ave		0.0733				8.6		15.0			
1,2,3-Trimethylbenzene	2.3146 2.7560	2.3139	2.2741	2.3695	2.6939	Ave		2.4537				8.7		15.0			
2-Methylnaphthalene	0.9245 0.2001	1.0409	0.7310	0.5723	0.4750	Qua	0.8511	0.6950	-0.006						0.9940		0.9900
n-Butyl acetate	0.1905 0.2249	0.1995	0.1965	0.2017	0.2071	Ave		0.2034				5.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84966/13	UXJ1372.D
Level 2	STD2 240-84966/12	UXJ1371.D
Level 3	STD3 240-84966/11	UXJ1370.D
Level 4	STD4 240-84966/10	UXJ1369.D
Level 5	STD5 240-84966/9	UXJ1368.D
Level 6	STD6 240-84966/8	UXJ1367.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	32694 1346105	68320	162432	317592	688412	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	29333 1298919	57780	160324	296853	632946	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	16290 944788	35256	102386	202686	455482	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	165194 8023786	361494	925168	1727041	3920564	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	49598 2396641	109035	276263	568280	1187748	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	90351 4268286	201096	506182	917710	2054484	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Lin1	3478 201934	11198	20163	47227	92829	2.00 80.0	4.00	10.0	20.0	40.0
Ethyl acetate	FB	Ave	47525 1843695	101344	222255	458842	862497	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	13989 601154	30596	74338	152536	297918	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	CBZ	Qua	6545 213729	15428	24813	60625	124073	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	85080 4011180	179271	460318	837583	1877996	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Qua	6702 337746	12344	38255	110063	168448	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	CBZ	Ave	5290 228420	11983	26500	55565	96711	20.0 800	40.0	100	200	400
Methyl methacrylate	FB	Ave	18363 898565	38674	102434	201238	430543	1.00 40.0	2.00	5.00	10.0	20.0
2-Nitropropane	FB	Ave	9498 397584	20855	42826	92542	180396	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Ave	14796 694914	41945	79590	159347	319590	10.0 400	20.0	50.0	100	200

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,2,3-Trimethylbenzene	DCB	Ave	51781 2562222	114384	253819	533648	1193211	1.00 40.0	2.00	5.00	10.0	20.0
2-Methylnaphthalene	DCB	Qua	41366 372083	102911	163182	257763	420746	2.00 80.0	4.00	10.0	20.0	40.0
n-Butyl acetate	FB	Ave	48723 2500313	103267	261963	543909	1128219	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: A3UX11 Start Date: 05/09/2013 09:54

Analysis Batch Number: 85269 End Date: 05/09/2013 20:18

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-85269/1		05/09/2013 09:54	1	BFB118.D	DB-624 0.18(mm)
CCVIS 240-85269/2		05/09/2013 10:28	1	UXJ1423.D	DB-624 0.18(mm)
CCV 240-85269/3		05/09/2013 10:51	1	UXJ1424.D	DB-624 0.18(mm)
LCS 240-85269/4		05/09/2013 11:13	1	UXJ1425.D	DB-624 0.18(mm)
MB 240-85269/5		05/09/2013 11:57	1	UXJ1427.D	DB-624 0.18(mm)
ZZZZZ		05/09/2013 12:20	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 12:43	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 13:06	1		DB-624 0.18(mm)
240-23812-1	TB-042913	05/09/2013 13:28	1	UXJ1431.D	DB-624 0.18(mm)
240-23812-2	MRC-MW41A-042913	05/09/2013 13:51	1	UXJ1432.D	DB-624 0.18(mm)
240-23812-3	MRC-MW98A-042913	05/09/2013 14:14	1	UXJ1433.D	DB-624 0.18(mm)
240-23812-4	MRC-MW98B-042913	05/09/2013 14:36	16.67	UXJ1434.D	DB-624 0.18(mm)
240-23812-5	MRC-MW-48A-042913	05/09/2013 14:59	25	UXJ1435.D	DB-624 0.18(mm)
240-23812-6	MRC-MW-111A-042913	05/09/2013 15:22	1	UXJ1436.D	DB-624 0.18(mm)
240-23812-7	MRC-MW-111B-042913	05/09/2013 15:45	14.29	UXJ1437.D	DB-624 0.18(mm)
ZZZZZ		05/09/2013 16:08	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 16:30	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 16:53	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 17:16	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 17:39	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 18:02	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 18:24	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 18:47	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 19:10	1		DB-624 0.18(mm)
ZZZZZ		05/09/2013 19:33	1		DB-624 0.18(mm)
240-23812-4 MS	MRC-MW98B-042913 MS	05/09/2013 19:55	16.67	UXJ1448.D	DB-624 0.18(mm)
240-23812-4 MSD	MRC-MW98B-042913 MSD	05/09/2013 20:18	16.67	UXJ1449.D	DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: BFB118.D BFB Injection Date: 05/09/2013

Instrument ID: A3UX11 BFB Injection Time: 09:54

Analysis Batch No.: 85269

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.6	
75	30.0 - 60.0 % of mass 95	46.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.1	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	89.5	
175	5.0 - 9.0 % of mass 174	7.2	(8.1)1
176	95.0 - 101.0 % of mass 174	86.8	(97.0)1
177	5.0 - 9.0 % of mass 176	5.6	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-85269/2	UXJ1423.D	05/09/2013	10:28
	CCV 240-85269/3	UXJ1424.D	05/09/2013	10:51
	LCS 240-85269/4	UXJ1425.D	05/09/2013	11:13
	MB 240-85269/5	UXJ1427.D	05/09/2013	11:57
TB-042913	240-23812-1	UXJ1431.D	05/09/2013	13:28
MRC-MW41A-042913	240-23812-2	UXJ1432.D	05/09/2013	13:51
MRC-MW98A-042913	240-23812-3	UXJ1433.D	05/09/2013	14:14
MRC-MW98B-042913	240-23812-4	UXJ1434.D	05/09/2013	14:36
MRC-MW-48A-042913	240-23812-5	UXJ1435.D	05/09/2013	14:59
MRC-MW-111A-042913	240-23812-6	UXJ1436.D	05/09/2013	15:22
MRC-MW-111B-042913	240-23812-7	UXJ1437.D	05/09/2013	15:45
MRC-MW98B-042913 MS	240-23812-4 MS	UXJ1448.D	05/09/2013	19:55
MRC-MW98B-042913 MSD	240-23812-4 MSD	UXJ1449.D	05/09/2013	20:18

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVIS 240-85269/2 Calibration Date: 05/09/2013 10:28

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1541	0.1730		1.00	0.0100	12.2	50.0
Chloromethane	Ave	0.1968	0.1703	0.1000	1.00	0.0100	-13.5	50.0
Vinyl chloride	Ave	0.1812	0.1670		1.00	0.0100	-7.8	20.0
Bromomethane	Ave	0.0748	0.0638		1.00	0.0100	-14.7	50.0
Chloroethane	Ave	0.0878	0.0766		1.00	0.0100	-12.7	50.0
Trichlorofluoromethane	Ave	0.1818	0.2007		1.00	0.0100	10.4	50.0
Acrolein	Ave	0.0300	0.0299		20.0	0.100	-0.4	50.0
Acetone	Lin1		0.0465		10.0	0.0200	9.7	50.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.0984	0.1185		1.00	0.0100	20.4	50.0
1,1-Dichloroethene	Ave	0.2042	0.1818		1.00	0.0100	-11.0	20.0
Iodomethane	Ave	0.2748	0.2278		1.00	0.0100	-17.1	50.0
Carbon disulfide	Ave	0.5568	0.4903		1.00	0.0100	-12.0	50.0
Acetonitrile	Ave	0.0099	0.0130		20.0	0.100	31.5	50.0
Methyl acetate	Ave	0.1419	0.1375		10.0	0.0200	-3.1	50.0
Methylene Chloride	Lin1		0.2227		1.00	0.0100	-12.6	50.0
tert-Butyl alcohol	Ave	0.0075	0.0093		50.0	0.200	23.1	50.0
Acrylonitrile	Ave	0.0692	0.0715		20.0	0.0200	3.3	50.0
Methyl tert-butyl ether	Ave	0.7008	0.6479		1.00	0.0100	-7.6	50.0
trans-1,2-Dichloroethene	Ave	0.3424	0.2989		1.00	0.0100	-12.7	50.0
Hexane	Ave	0.0625	0.0710		1.00	0.0100	13.6	20.0
1,1-Dichloroethane	Ave	0.5309	0.4676	0.1000	1.00	0.0100	-11.9	50.0
Vinyl acetate	Ave	0.0583	0.0523		2.00	0.0100	-10.3	50.0
2-Butanone	Ave	0.0699	0.0718		10.0	0.0200	2.7	50.0
cis-1,2-Dichloroethene	Ave	0.3497	0.3126		1.00	0.0100	-10.6	50.0
2,2-Dichloropropane	Ave	0.2538	0.2072		1.00	0.0100	-18.3	50.0
Bromochloromethane	Ave	0.1708	0.1547		1.00	0.0100	-9.4	50.0
Tetrahydrofuran	Ave	0.0453	0.0460		5.00	0.0100	1.5	50.0
Chloroform	Ave	0.5348	0.4735		1.00	0.0100	-11.5	20.0
1,1,1-Trichloroethane	Ave	0.3597	0.3018		1.00	0.0100	-16.1	50.0
Cyclohexane	Ave	0.3353	0.3364		1.00	0.0100	0.3	50.0
1,1-Dichloropropene	Ave	0.4140	0.3689		1.00	0.0100	-10.9	50.0
Carbon tetrachloride	Ave	0.3255	0.2922		1.00	0.0100	-10.2	50.0
1,2-Dichloroethane	Ave	0.3439	0.3085		1.00	0.0100	-10.3	50.0
Benzene	Ave	1.327	1.161		1.00	0.0100	-12.6	50.0
Trichloroethene	Ave	0.3459	0.3014		1.00	0.0100	-12.9	50.0
Methylcyclohexane	Ave	0.3642	0.3873		1.00	0.0100	6.3	50.0
1,2-Dichloropropane	Ave	0.2962	0.2595		1.00	0.0100	-12.4	20.0
Dibromomethane	Ave	0.1591	0.1446		1.00	0.0100	-9.1	50.0
1,4-Dioxane	Qua		0.0010		50.0	0.500	-0.3	50.0
Bromodichloromethane	Ave	0.3646	0.3303		1.00	0.0100	-9.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVIS 240-85269/2 Calibration Date: 05/09/2013 10:28

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1495	0.1373		10.0	0.0200	-8.2	50.0
cis-1,3-Dichloropropene	Ave	0.4406	0.4050		1.00	0.0100	-8.1	50.0
4-Methyl-2-pentanone	Ave	0.1409	0.1371		10.0	0.0200	-2.7	50.0
Toluene	Ave	2.320	2.113		1.00	0.0100	-8.9	20.0
trans-1,3-Dichloropropene	Ave	0.5945	0.5851		1.00	0.0100	-1.6	50.0
Ethyl methacrylate	Ave	0.5077	0.4625		1.00	0.0100	-8.9	50.0
1,1,2-Trichloroethane	Ave	0.3894	0.3696		1.00	0.0100	-5.1	50.0
1,3-Dichloropropane	Ave	0.6796	0.6302		1.00	0.0100	-7.3	50.0
Tetrachloroethene	Ave	0.4149	0.3766		1.00	0.0100	-9.2	50.0
2-Hexanone	Ave	0.1330	0.1322		10.0	0.0200	-0.6	50.0
Dibromochloromethane	Ave	0.3873	0.3856		1.00	0.0100	-0.4	50.0
1,2-Dibromoethane	Ave	0.3484	0.3306		1.00	0.0100	-5.1	50.0
Chlorobenzene	Ave	1.154	1.042	0.3000	1.00	0.0100	-9.7	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3805	0.3669		1.00	0.0100	-3.6	50.0
Ethylbenzene	Ave	0.6018	0.5554		1.00	0.0100	-7.7	20.0
m-Xylene & p-Xylene	Ave	0.7008	0.6470		2.00	0.0200	-7.7	50.0
o-Xylene	Ave	0.5795	0.5496		1.00	0.0100	-5.2	50.0
Styrene	Ave	0.9442	0.9031		1.00	0.0100	-4.4	50.0
Bromoform	Ave	0.1517	0.1512	0.1000	1.00	0.0100	-0.3	50.0
Isopropylbenzene	Ave	1.229	1.139		1.00	0.0100	-7.4	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7596	0.6764	0.3000	1.00	0.0100	-10.9	50.0
Bromobenzene	Ave	0.9629	0.8840		1.00	0.0100	-8.2	50.0
1,2,3-Trichloropropane	Ave	0.2360	0.2084		1.00	0.0100	-11.7	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1572		1.00	0.0100	7.8	50.0
n-Propylbenzene	Ave	0.8913	0.8176		1.00	0.0100	-8.3	50.0
2-Chlorotoluene	Ave	0.8067	0.7684		1.00	0.0100	-4.7	50.0
1,3,5-Trimethylbenzene	Ave	2.378	2.299		1.00	0.0100	-3.3	50.0
4-Chlorotoluene	Ave	0.8535	0.8141		1.00	0.0100	-4.6	50.0
tert-Butylbenzene	Ave	1.949	1.837		1.00	0.0100	-5.7	50.0
1,2,4-Trimethylbenzene	Ave	2.404	2.310		1.00	0.0100	-3.9	50.0
sec-Butylbenzene	Ave	2.681	2.665		1.00	0.0100	-0.6	50.0
1,3-Dichlorobenzene	Ave	1.635	1.519		1.00	0.0100	-7.1	50.0
p-Isopropyltoluene	Ave	2.250	2.231		1.00	0.0100	-0.8	50.0
1,4-Dichlorobenzene	Ave	1.694	1.572		1.00	0.0100	-7.2	50.0
n-Butylbenzene	Ave	1.961	1.953		1.00	0.0100	-0.4	50.0
1,2-Dichlorobenzene	Ave	1.556	1.470		1.00	0.0100	-5.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1181	0.1137		2.00	0.0100	-3.8	50.0
1,3,5-Trichlorobenzene	Ave	0.9181	0.8710		1.00	0.0100	-5.1	50.0
1,2,4-Trichlorobenzene	Qua		0.6444		1.00	0.0100	-14.9	50.0
Hexachlorobutadiene	Qua		0.3350		1.00	0.0100	1.4	50.0
Naphthalene	Qua		1.286		1.00	0.0100	-30.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVIS 240-85269/2 Calibration Date: 05/09/2013 10:28

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1423.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Qua		0.4993		1.00	0.0100	-27.3	50.0
Dibromofluoromethane (Surr)	Ave	0.2849	0.2445		0.00716	0.00834	-14.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2918	0.2421		0.00692	0.00834	-17.0	50.0
Toluene-d8 (Surr)	Ave	1.896	1.716		0.00755	0.00834	-9.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.3284	0.3074		0.00781	0.00834	-6.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCV 240-85269/3 Calibration Date: 05/09/2013 10:51

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 13:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 15:18

Lab File ID: UXJ1424.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.2489	0.2105		2.00	0.0100	-15.5	50.0
Ethyl ether	Ave	0.2299	0.2085		2.00	0.0100	-9.3	50.0
3-Chloro-1-propene	Ave	0.1508	0.1352		2.00	0.0100	-10.3	50.0
Diisopropyl ether	Ave	0.2747	0.2486		10.0	0.0500	-9.5	50.0
2-Chloro-1,3-butadiene	Ave	0.4187	0.3876		2.00	0.0100	-7.4	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7409	0.6928		5.00	0.0100	-6.5	50.0
Ethyl acetate	Ave	0.1738	0.1645		4.00	0.0200	-5.4	50.0
Propionitrile	Lin1		0.0208		4.00	0.0200	17.9	50.0
Methacrylonitrile	Ave	0.1116	0.1154		2.00	0.0100	3.4	50.0
Isobutyl alcohol	Qua		0.0061		50.0	0.200	53.8*	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.6801	0.6475		5.00	0.0100	-4.8	50.0
n-Heptane	Qua		0.0746		1.00	0.0100	10.4	50.0
n-Butanol	Ave	0.0035	0.0047		50.0	0.200	31.8	50.0
Methyl methacrylate	Ave	0.1526	0.1531		2.00	0.0100	0.3	50.0
2-Nitropropane	Ave	0.0355	0.0366		2.00	0.0200	3.3	50.0
Cyclohexanone	Ave	0.0733	0.0684		20.0	0.100	-6.8	50.0
1,2,3-Trimethylbenzene	Ave	2.454	2.336		0.00952	0.0100	-4.8	50.0
2-Methylnaphthalene	Qua		0.1044		5.00	0.0200	-91.0*	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: UXJ1427.D Lab Sample ID: MB 240-85269/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 05/09/2013 11:57

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85269/4	UXJ1425.D	05/09/2013 11:13
TB-042913	240-23812-1	UXJ1431.D	05/09/2013 13:28
MRC-MW41A-042913	240-23812-2	UXJ1432.D	05/09/2013 13:51
MRC-MW98A-042913	240-23812-3	UXJ1433.D	05/09/2013 14:14
MRC-MW98B-042913	240-23812-4	UXJ1434.D	05/09/2013 14:36
MRC-MW-48A-042913	240-23812-5	UXJ1435.D	05/09/2013 14:59
MRC-MW-111A-042913	240-23812-6	UXJ1436.D	05/09/2013 15:22
MRC-MW-111B-042913	240-23812-7	UXJ1437.D	05/09/2013 15:45
MRC-MW98B-042913 MS	240-23812-4 MS	UXJ1448.D	05/09/2013 19:55
MRC-MW98B-042913 MSD	240-23812-4 MSD	UXJ1449.D	05/09/2013 20:18

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85269/5

Matrix: Water | Lab File ID: UXJ1427.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85269/5

Matrix: Water Lab File ID: UXJ1427.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 11:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85269/5

Matrix: Water | Lab File ID: UXJ1427.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 11:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85269 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85269/5

Matrix: Water Lab File ID: UXJ1427.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 11:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85269 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1425.D

Lab ID: LCS 240-85269/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	20.2	101	43-136	
Benzene	10.0	9.15	92	83-112	
Bromobenzene	10.0	9.51	95	76-115	
Bromochloromethane	10.0	9.10	91	77-120	
Bromodichloromethane	10.0	9.62	96	72-121	
Bromoform	10.0	10.0	100	40-131	
Bromomethane	10.0	7.18	72	11-185	
2-Butanone	20.0	20.6	103	60-126	
Carbon disulfide	10.0	8.79	88	62-142	
Carbon tetrachloride	10.0	9.29	93	66-128	
Chlorobenzene	10.0	9.57	96	85-110	
Chloroethane	10.0	7.95	80	25-153	
2-Chloroethyl vinyl ether	10.0	9.31 J	93	52-131	
Chloroform	10.0	9.03	90	79-117	
Chloromethane	10.0	8.05	81	44-126	
2-Chlorotoluene	10.0	9.95	99	76-116	
4-Chlorotoluene	10.0	9.63	96	77-115	
cis-1,2-Dichloroethene	10.0	9.24	92	80-113	
cis-1,3-Dichloropropene	10.0	9.05	90	61-115	
Dibromochloromethane	10.0	10.4	104	64-119	
1,2-Dibromo-3-Chloropropane	10.0	9.99	100	42-136	
1,2-Dibromoethane	10.0	9.83	98	79-113	
Dibromomethane	10.0	9.81	98	81-120	
1,2-Dichlorobenzene	10.0	9.31	93	81-110	
1,3-Dichlorobenzene	10.0	9.25	93	80-110	
1,4-Dichlorobenzene	10.0	9.46	95	82-110	
Dichlorodifluoromethane	10.0	7.14	71	19-129	
1,1-Dichloroethane	10.0	9.41	94	82-115	
1,2-Dichloroethane	10.0	9.55	96	71-127	
1,1-Dichloroethene	10.0	9.01	90	78-131	
1,2-Dichloropropane	10.0	9.44	94	81-115	
1,3-Dichloropropane	10.0	9.83	98	79-116	
2,2-Dichloropropane	10.0	9.15	91	50-129	
1,1-Dichloropropene	10.0	8.96	90	83-114	
Diisopropyl ether	10.0	9.39	94	77-118	
Ethylbenzene	10.0	9.53	95	83-112	
Hexachlorobutadiene	10.0	8.06	81	36-134	
2-Hexanone	20.0	21.7	109	55-133	
Isopropylbenzene	10.0	9.61	96	75-114	
Methylene Chloride	10.0	9.38	94	66-131	
4-Methyl-2-pentanone	20.0	20.3	102	63-128	
Methyl tert-butyl ether	10.0	9.43	94	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1425.D

Lab ID: LCS 240-85269/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.4	97	83-113	
Naphthalene	10.0	6.14	61	32-141	
n-Butylbenzene	10.0	9.52	95	66-125	
n-Propylbenzene	10.0	9.42	94	74-121	
o-Xylene	10.0	9.80	98	83-113	
p-Isopropyltoluene	10.0	10.3	103	74-120	
sec-Butylbenzene	10.0	9.60	96	70-117	
Styrene	10.0	10.2	102	79-114	
tert-Butyl alcohol	200	266	133	70-130	*
tert-Butylbenzene	10.0	9.61	96	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.92	99	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.20	92	68-118	
Tetrachloroethene	10.0	9.34	93	79-114	
Toluene	10.0	9.49	95	84-111	
trans-1,2-Dichloroethene	10.0	8.74	87	83-117	
trans-1,3-Dichloropropene	10.0	10.3	103	58-117	
1,2,3-Trichlorobenzene	10.0	6.82	68	54-126	
1,2,4-Trichlorobenzene	10.0	7.76	78	48-135	
1,1,1-Trichloroethane	10.0	9.27	93	74-118	
Trichloroethene	10.0	8.96	90	76-117	
Trichlorofluoromethane	10.0	8.29	83	49-157	
1,2,3-Trichloropropane	10.0	9.22	92	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.61	96	74-151	
1,2,3-Trimethylbenzene	10.0	10.3	103	70-130	
1,2,4-Trimethylbenzene	10.0	9.90	99	76-120	
Vinyl acetate	10.0	8.96	90	46-161	
Vinyl chloride	10.0	8.16	82	53-127	
Xylenes, Total	30.0	29.2	97	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1448.D

Lab ID: 240-23812-4 MS Client ID: MRC-MW98B-042913 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	333	83 U	172	52	33-145	
Benzene	167	17 U	147	88	72-121	
Bromobenzene	167	17 U	157	94	71-116	
Bromochloromethane	167	17 U	136	81	73-121	
Bromodichloromethane	167	17 U	143	86	67-120	
Bromoform	167	17 U	127	76	32-128	
Bromomethane	167	17 U	130	78	10-186	
2-Butanone	333	83 U	237	71	54-129	
Carbon disulfide	167	17 U	143	86	57-147	
Carbon tetrachloride	167	17 U	125	75	59-129	
Chlorobenzene	167	17 U	150	90	80-110	
Chloroethane	167	32	192	96	21-165	
2-Chloroethyl vinyl ether	167	170 U	170 U	0	10-150	F
Chloroform	167	17 U	143	86	76-118	
Chloromethane	167	17 U	126	76	33-132	
2-Chlorotoluene	167	17 U	154	92	69-117	
4-Chlorotoluene	167	17 U	152	91	71-116	
cis-1,2-Dichloroethene	167	28	169	85	70-120	
cis-1,3-Dichloropropene	167	17 U	132	79	51-110	
Dibromochloromethane	167	17 U	142	85	56-118	
1,2-Dibromo-3-Chloropropane	167	83 U	155	93	32-139	
1,2-Dibromoethane	167	17 U	148	89	74-113	
Dibromomethane	167	17 U	150	90	77-121	
1,2-Dichlorobenzene	167	17 U	147	88	75-111	
1,3-Dichlorobenzene	167	17 U	139	83	73-110	
1,4-Dichlorobenzene	167	17 U	143	86	75-110	
Dichlorodifluoromethane	167	17 U	144	86	17-128	
1,1-Dichloroethane	167	110	250	85	79-116	
1,2-Dichloroethane	167	17 U	148	89	68-129	
1,1-Dichloroethene	167	250	330	45	74-135	F
1,2-Dichloropropane	167	17 U	147	88	78-115	
1,3-Dichloropropane	167	17 U	147	88	74-118	
2,2-Dichloropropane	167	17 U	117	70	38-127	
1,1-Dichloropropene	167	17 U	147	88	80-114	
Diisopropyl ether	167	83 U	142	85	73-118	
Ethylbenzene	167	17 U	147	88	75-116	
Hexachlorobutadiene	167	17 U	126	75	27-132	
2-Hexanone	333	83 U	289	87	47-139	
Isopropylbenzene	167	17 U	154	92	68-116	
Methylene Chloride	167	25	137	68	63-128	
4-Methyl-2-pentanone	333	83 U	280	84	56-131	
Methyl tert-butyl ether	167	17 U	134	80	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1448.D

Lab ID: 240-23812-4 MS Client ID: MRC-MW98B-042913 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	333	33 U	306	92	75-117	
Naphthalene	167	17 U	102	61	15-158	
n-Butylbenzene	167	17 U	134	80	56-127	
n-Propylbenzene	167	17 U	152	91	64-124	
o-Xylene	167	17 U	159	95	76-116	
p-Isopropyltoluene	167	17 U	144	87	64-122	
sec-Butylbenzene	167	17 U	139	83	60-119	
Styrene	167	17 U	161	97	71-117	
tert-Butyl alcohol	3330	330 U	1940	58	70-130	F
tert-Butylbenzene	167	17 U	145	87	61-119	
1,1,1,2-Tetrachloroethane	167	17 U	143	86	64-118	
1,1,2,2-Tetrachloroethane	167	17 U	159	95	63-122	
Tetrachloroethene	167	6.7 J	147	84	70-117	
Toluene	167	17 U	143	86	78-114	
trans-1,2-Dichloroethene	167	17 U	140	84	80-119	
trans-1,3-Dichloropropene	167	17 U	140	84	46-116	
1,2,3-Trichlorobenzene	167	17 U	113	68	45-129	
1,2,4-Trichlorobenzene	167	17 U	123	74	38-138	
1,1,1-Trichloroethane	167	60	198	83	68-121	
Trichloroethene	167	530	640	64	66-120	F
Trichlorofluoromethane	167	17 U	142	85	46-157	
1,2,3-Trichloropropane	167	17 U	159	95	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	167	17 U	172	103	70-152	
1,2,3-Trimethylbenzene	167	83 U	154	92	70-130	
1,2,4-Trimethylbenzene	167	17 U	150	90	67-124	
Vinyl acetate	167	33 U	140	84	43-157	
Vinyl chloride	167	17 U	141	84	49-130	
Xylenes, Total	500	33 U	465	93	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1449.D

Lab ID: 240-23812-4 MSD Client ID: MRC-MW98B-042913 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	333	149	45	14	30	33-145	
Benzene	167	155	93	5	30	72-121	
Bromobenzene	167	164	98	5	30	71-116	
Bromochloromethane	167	142	85	5	30	73-121	
Bromodichloromethane	167	150	90	4	30	67-120	
Bromoform	167	124	74	2	30	32-128	
Bromomethane	167	144	86	10	30	10-186	
2-Butanone	333	224	67	6	30	54-129	
Carbon disulfide	167	137	82	5	30	57-147	
Carbon tetrachloride	167	129	77	2	30	59-129	
Chlorobenzene	167	156	94	4	30	80-110	
Chloroethane	167	203	103	5	30	21-165	
2-Chloroethyl vinyl ether	167	170 U	0	NC	30	10-150	F
Chloroform	167	152	91	6	30	76-118	
Chloromethane	167	129	78	2	30	33-132	
2-Chlorotoluene	167	163	98	5	30	69-117	
4-Chlorotoluene	167	159	95	5	30	71-116	
cis-1,2-Dichloroethene	167	176	89	4	30	70-120	
cis-1,3-Dichloropropene	167	136	81	3	30	51-110	
Dibromochloromethane	167	138	83	3	30	56-118	
1,2-Dibromo-3-Chloropropane	167	148	89	4	30	32-139	
1,2-Dibromoethane	167	152	91	3	30	74-113	
Dibromomethane	167	156	93	4	30	77-121	
1,2-Dichlorobenzene	167	155	93	5	30	75-111	
1,3-Dichlorobenzene	167	155	93	11	30	73-110	
1,4-Dichlorobenzene	167	155	93	8	30	75-110	
Dichlorodifluoromethane	167	121	73	17	30	17-128	
1,1-Dichloroethane	167	259	90	3	30	79-116	
1,2-Dichloroethane	167	153	91	3	30	68-129	
1,1-Dichloroethene	167	325	42	2	30	74-135	F
1,2-Dichloropropane	167	158	95	7	30	78-115	
1,3-Dichloropropane	167	156	94	6	30	74-118	
2,2-Dichloropropane	167	125	75	7	30	38-127	
1,1-Dichloropropene	167	144	87	2	30	80-114	
Diisopropyl ether	167	146	87	3	30	73-118	
Ethylbenzene	167	156	94	6	30	75-116	
Hexachlorobutadiene	167	132	79	5	30	27-132	
2-Hexanone	333	307	92	6	30	47-139	
Isopropylbenzene	167	160	96	4	30	68-116	
Methylene Chloride	167	155	78	12	30	63-128	
4-Methyl-2-pentanone	333	296	89	5	30	56-131	
Methyl tert-butyl ether	167	130	78	3	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1449.D

Lab ID: 240-23812-4 MSD Client ID: MRC-MW98B-042913 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	333	315	95	3	30	75-117	
Naphthalene	167	117	70	14	30	15-158	
n-Butylbenzene	167	146	87	8	30	56-127	
n-Propylbenzene	167	163	98	7	30	64-124	
o-Xylene	167	168	101	6	30	76-116	
p-Isopropyltoluene	167	159	96	10	30	64-122	
sec-Butylbenzene	167	156	93	12	30	60-119	
Styrene	167	173	104	7	30	71-117	
tert-Butyl alcohol	3330	2000	60	3	30	70-130	F
tert-Butylbenzene	167	156	93	7	30	61-119	
1,1,1,2-Tetrachloroethane	167	152	91	6	30	64-118	
1,1,2,2-Tetrachloroethane	167	158	95	1	30	63-122	
Tetrachloroethene	167	150	86	3	30	70-117	
Toluene	167	148	89	4	30	78-114	
trans-1,2-Dichloroethene	167	146	88	4	30	80-119	
trans-1,3-Dichloropropene	167	146	88	5	30	46-116	
1,2,3-Trichlorobenzene	167	130	78	14	30	45-129	
1,2,4-Trichlorobenzene	167	134	80	9	30	38-138	
1,1,1-Trichloroethane	167	197	82	1	30	68-121	
Trichloroethene	167	664	79	4	30	66-120	
Trichlorofluoromethane	167	133	80	6	30	46-157	
1,2,3-Trichloropropane	167	160	96	1	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	167	146	87	17	30	70-152	
1,2,3-Trimethylbenzene	167	164	98	6	30	70-130	
1,2,4-Trimethylbenzene	167	161	97	7	30	67-124	
Vinyl acetate	167	139	84	1	30	43-157	
Vinyl chloride	167	144	86	2	30	49-130	
Xylenes, Total	500	483	97	4	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD8260 240-84966/4 Date Analyzed: 05/07/2013 11:53

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ1363.D Heated Purge: (Y/N) N

Calibration ID: 15041

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1341609	5.10	790643	7.77	258451	10.00
UPPER LIMIT		2683218	5.60	1581286	8.27	516902	10.50
LOWER LIMIT		670805	4.60	395322	7.27	129226	9.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVIS 240-85269/2		1476180	5.10	825470	7.77	279245	10.00

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII

GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: CCVIS 240-85269/2 Date Analyzed: 05/09/2013 10:28

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ1423.D Heated Purge: (Y/N) N

Calibration ID: 15043

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1476180	5.10	825470	7.77	279245	10.00
UPPER LIMIT		2952360	5.60	1650940	8.27	558490	10.50
LOWER LIMIT		738090	4.60	412735	7.27	139623	9.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-85269/3		1426741	5.10	768710	7.77	209525	10.00
LCS 240-85269/4		1378042	5.10	757398	7.77	255555	10.00
MB 240-85269/5		1285361	5.10	699504	7.77	201515	10.00
240-23812-1	TB-042913	1282382	5.10	704380	7.77	206407	10.00
240-23812-2	MRC-MW41A-042913	1245935	5.10	696367	7.77	228293	10.00
240-23812-3	MRC-MW98A-042913	1255723	5.10	711923	7.77	191023	10.00
240-23812-4	MRC-MW98B-042913	1223749	5.10	693108	7.77	197661	10.00
240-23812-5	MRC-MW-48A-042913	1241605	5.10	682162	7.77	180480	10.00
240-23812-6	MRC-MW-111A-042913	1235636	5.10	689201	7.77	197327	10.00
240-23812-7	MRC-MW-111B-042913	1237573	5.10	713727	7.77	196854	10.00
240-23812-4 MS	MRC-MW98B-042913 MS	1247139	5.10	732452	7.77	242990	10.00
240-23812-4 MSD	MRC-MW98B-042913 MSD	1241963	5.10	723572	7.77	231379	10.00

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

SDG 240-23812

SAMPLE ID MRC-MW-48A-042913

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST / CAS NO.	IS AMOUNT (NG)	Final Volume (ML)	AVE RRF	CONCENTRATION ug/L
1241605	25	1206604	10	5	0.3459	702.38
				Sample Volume (ML)		
				5		

Trichloroethene = 700 ug/L

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\A3UX11\20130509-19671.b\UXJ1435.D
Lims ID: 240-23812-B-5 Client ID: MRC-MW-48A-042913
Inject. Date: 09-May-2013 14:59:30 Dil. Factor: 25.0000
Sample Type: Client
Sample ID: 240-0019671-013
Misc. Info.: J30509A,8260LLUX11,,43582
Operator: 43582 Instrument ID: A3UX11
Purge Vol: 5.000 mL ALS Bottle#: 13
Lims Batch ID: 85269 Lims Sample ID: 13
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A3UX11\20130509-19671.b\8260_11.m
Last Update: 10-May-2013 08:00:49 Calib Date: 07-May-2013 15:18:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX11\20130507-19604.b\UXJ1372.D
Limit Group: MSV 8260B ICAL
Integrator: RTE ID Type: Deconvolution ID
Column Type: DB-624 Column Dia: 0.18 mm
Process Host: XAWRK022

First Level Reviewer: evansle Date: 10-May-2013 07:56:10

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.103	5.103	0.0	100	1241605	10.0	
* 2 Chlorobenzene-d5	117	7.766	7.766	0.0	82	682162	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.002	10.002	0.0	91	180480	10.0	
$ 4 Dibromofluoromethane (Surr)	113	4.535	4.535	0.0	95	265552	7.51	
$ 5 1,2-Dichloroethane-d4 (Surr)	65	4.819	4.819	0.0	88	272411	7.52	
$ 6 Toluene-d8 (Surr)	98	6.452	6.452	0.0	92	988789	7.65	
$ 7 4-Bromofluorobenzene (Surr)	95	8.878	8.878	0.0	93	160409	7.16	
8 Dichlorodifluoromethane	85		1.542					
9 Chloromethane	50		1.695					
10 Vinyl chloride	62	1.778	1.778	0.0	61	50455	2.24	
11 Bromomethane	94		2.062					
12 Chloroethane	64		2.145					
14 Trichlorofluoromethane	101		2.358					
17 Acetone	43		2.760					
18 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.772					
19 1,1-Dichloroethene	96		2.772					9
23 Carbon disulfide	76		2.962					
26 Methylene Chloride	84	3.115	3.115	0.0	69	45060	0.7458	
27 2-Methyl-2-propanol	59		3.186					
29 trans-1,2-Dichloroethene	96	3.340	3.352	-0.012	56	8296	0.1951	
30 Methyl tert-butyl ether	73		3.352					
32 1,1-Dichloroethane	63		3.683					9
33 Vinyl acetate	86		3.707					
34 Isopropyl ether	87		3.731					
37 Tert-butyl ethyl ether	59		4.027					
38 2-Butanone (MEK)	43		4.145					9
40 cis-1,2-Dichloroethene	96	4.145	4.145	0.0	78	1030851	23.7	
39 2,2-Dichloropropane	77		4.157					
43 Chlorobromomethane	128		4.346					
45 Chloroform	83		4.405					9

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
46 1,1,1-Trichloroethane	97		4.571					
48 1,1-Dichloropropene	75		4.701					
49 Carbon tetrachloride	117		4.713					
52 Benzene	78		4.878					9
51 1,2-Dichloroethane	62		4.878					
53 Tert-amyl methyl ether	73		4.961					
56 Trichloroethene	130	5.411	5.411	0.0	96	1206604	28.1	
59 1,2-Dichloropropane	63		5.600					
61 Dibromomethane	93		5.695					
63 Dichlorobromomethane	83		5.825					9
65 2-Chloroethyl vinyl ether	63		6.074					
66 cis-1,3-Dichloropropene	75		6.204					
67 4-Methyl-2-pentanone (MIBK)	43		6.334					
68 Toluene	91		6.511					9
69 trans-1,3-Dichloropropene	75		6.689					
73 1,3-Dichloropropane	76		7.008					
72 Tetrachloroethene	164	7.020	7.020	0.0	57	5747	0.2031	
74 2-Hexanone	43		7.079					
76 Chlorodibromomethane	129		7.221					
77 Ethylene Dibromide	107		7.340					
79 Chlorobenzene	112		7.789					
80 1,1,1,2-Tetrachloroethane	131		7.860					
81 Ethylbenzene	106		7.896					
82 m-Xylene & p-Xylene	106		8.002					
83 o-Xylene	106		8.381					9
84 Styrene	104		8.381					
85 Bromoform	173		8.559					
86 Isopropylbenzene	105		8.724					9
88 1,1,2,2-Tetrachloroethane	83		8.996					
89 Bromobenzene	156		9.032					
90 1,2,3-Trichloropropane	110		9.044					
92 N-Propylbenzene	120		9.126					
93 2-Chlorotoluene	126		9.209					
95 4-Chlorotoluene	126		9.316					
96 tert-Butylbenzene	119		9.623					
97 1,2,4-Trimethylbenzene	105		9.671					9
98 sec-Butylbenzene	105		9.836					
99 1,3-Dichlorobenzene	146		9.943					
100 4-Isopropyltoluene	119		9.978					
101 1,4-Dichlorobenzene	146		10.026					
102 1,2,3-Trimethylbenzene	105		10.085					
103 n-Butylbenzene	91		10.381					
104 1,2-Dichlorobenzene	146		10.404					
105 1,2-Dibromo-3-Chloropropane	157		11.162					
107 1,2,4-Trichlorobenzene	180		12.002					
108 Hexachlorobutadiene	225		12.179					
109 Naphthalene	128		12.250					
110 1,2,3-Trichlorobenzene	180		12.499					
S 114 Xylenes, Total	106		16.530					

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW41A-042913	240-23812-2	65	66	63	67	83	48
MRC-MW98A-042913	240-23812-3	57	59	58	61	73	47
MRC-MW98B-042913	240-23812-4	64	67	59	71	81	59
MRC-MW-111A-042913	240-23812-6	63	66	62	66	79	50
MRC-MW-111B-042913	240-23812-7	61	61	59	66	63	50
	MB 240-84624/23-A	60	61	59	61	63	47
	LCS 240-84624/24-A	75	75	74	79	91	54

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/28/2013 16:58

Analysis Batch Number: 83888 End Date: 04/29/2013 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-83888/1		04/28/2013 16:58	1	0428001.D	RXI-5SILMS 0.45(mm)
STD9 240-83888/2 IC		04/28/2013 17:16	1		RXI-5SILMS 0.45(mm)
STD8 240-83888/3 IC		04/28/2013 17:37	1		RXI-5SILMS 0.45(mm)
STD7 240-83888/4 IC		04/28/2013 17:59	1		RXI-5SILMS 0.45(mm)
STD6 240-83888/5 IC		04/28/2013 18:21	1		RXI-5SILMS 0.45(mm)
STD5 240-83888/6 IC		04/28/2013 18:43	1		RXI-5SILMS 0.45(mm)
STD4 240-83888/7 IC		04/28/2013 19:05	1		RXI-5SILMS 0.45(mm)
STD3 240-83888/8 IC		04/28/2013 19:26	1		RXI-5SILMS 0.45(mm)
STD2 240-83888/9 IC		04/28/2013 19:48	1		RXI-5SILMS 0.45(mm)
STD9 240-83888/10 IC		04/28/2013 20:10	1	0428010.D	RXI-5SILMS 0.45(mm)
STD8 240-83888/11 IC		04/28/2013 20:32	1	0428011.D	RXI-5SILMS 0.45(mm)
STD7 240-83888/12 IC		04/28/2013 20:54	1	0428012.D	RXI-5SILMS 0.45(mm)
STD6 240-83888/13 ICIS		04/28/2013 21:15	1	0428013.D	RXI-5SILMS 0.45(mm)
STD5 240-83888/14 IC		04/28/2013 21:37	1	0428014.D	RXI-5SILMS 0.45(mm)
STD4 240-83888/15 IC		04/28/2013 21:59	1	0428015.D	RXI-5SILMS 0.45(mm)
STD3 240-83888/16 IC		04/28/2013 22:21	1	0428016.D	RXI-5SILMS 0.45(mm)
STD2 240-83888/17 IC		04/28/2013 22:43	1	0428017.D	RXI-5SILMS 0.45(mm)
STD1 240-83888/18 IC		04/28/2013 23:05	1	0428018.D	RXI-5SILMS 0.45(mm)
ICV 240-83888/19		04/28/2013 23:26	1	0428019.D	RXI-5SILMS 0.45(mm)
STD9 240-83888/20 IC		04/28/2013 23:48	1		RXI-5SILMS 0.45(mm)
STD8 240-83888/21 IC		04/29/2013 00:10	1		RXI-5SILMS 0.45(mm)
STD7 240-83888/22 IC		04/29/2013 00:32	1		RXI-5SILMS 0.45(mm)
STD6 240-83888/23 IC		04/29/2013 00:54	1		RXI-5SILMS 0.45(mm)
STD5 240-83888/24 IC		04/29/2013 01:15	1		RXI-5SILMS 0.45(mm)
STD4 240-83888/25 IC		04/29/2013 01:37	1		RXI-5SILMS 0.45(mm)
STD3 240-83888/26 IC		04/29/2013 01:59	1		RXI-5SILMS 0.45(mm)
STD2 240-83888/27 IC		04/29/2013 02:21	1		RXI-5SILMS 0.45(mm)
ZZZZZ		04/29/2013 02:43	1		RXI-5SILMS 0.45(mm)
ZZZZZ		04/29/2013 03:05	1		RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: 0428001.D DFTPP Injection Date: 04/28/2013

Instrument ID: A4AG2 DFTPP Injection Time: 16:58

Analysis Batch No.: 83888

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	52.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	50.9	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	58.2	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.7	
365	Greater than 0.75% of mass 198	2.8	
441	Present, but less than mass 443	7.8	
442	40.0 - 110.0% of mass 198	55.0	
443	15.0 - 24.0% of mass 442	10.5	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-83888/10	0428010.D	04/28/2013	20:10
	STD8 240-83888/11	0428011.D	04/28/2013	20:32
	STD7 240-83888/12	0428012.D	04/28/2013	20:54
	STD6 240-83888/13	0428013.D	04/28/2013	21:15
	STD5 240-83888/14	0428014.D	04/28/2013	21:37
	STD4 240-83888/15	0428015.D	04/28/2013	21:59
	STD3 240-83888/16	0428016.D	04/28/2013	22:21
	STD2 240-83888/17	0428017.D	04/28/2013	22:43
	STD1 240-83888/18	0428018.D	04/28/2013	23:05
	ICV 240-83888/19	0428019.D	04/28/2013	23:26

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-83888/18	0428018.D
Level 2	STD2 240-83888/17	0428017.D
Level 3	STD3 240-83888/16	0428016.D
Level 4	STD4 240-83888/15	0428015.D
Level 5	STD5 240-83888/14	0428014.D
Level 6	STD6 240-83888/13	0428013.D
Level 7	STD7 240-83888/12	0428012.D
Level 8	STD8 240-83888/11	0428011.D
Level 9	STD9 240-83888/10	0428010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5345	0.5562 0.5304	0.5780 0.5768	0.5793 0.5678	0.5365	Ave		0.5574				3.8		20.0			
N-Nitrosodimethylamine	0.8024	0.7416 0.8156	0.7687 0.8991	0.7977 0.8740	0.7994	Ave		0.8123				6.4		20.0			
Pyridine	1.3547	0.9779 1.3706	1.3655 1.4887	1.3890 1.4488	1.3555	Ave		1.3439				12.0		20.0			
Benzaldehyde	1.3824 1.1547	1.1592 1.1383	1.1984 1.1902	1.2152 1.1034	1.2036	Ave		1.1939			0.0100	6.6		20.0			
Phenol	1.6409	1.6504 1.6449	1.6650 1.8045	1.6650 1.7355	1.6703	Ave		1.6846			0.8000	3.4		20.0			
Aniline	2.0902	1.9585 2.0967	2.0489 2.2661	2.1056 2.1933	2.1175	Ave		2.1096				4.3		20.0			
Bis(2-chloroethyl)ether	1.3099	1.2894 1.3192	1.3340 1.4381	1.3845 1.3803	1.3297	Ave		1.3481			0.7000	3.6		20.0			
2-Chlorophenol	1.2599	1.1644 1.2668	1.2067 1.3720	1.2557 1.3257	1.2544	Ave		1.2632			0.8000	5.1		20.0			
1,3-Dichlorobenzene	1.3613	1.3531 1.3824	1.3700 1.4898	1.4004 1.4511	1.3785	Ave		1.3983				3.4		20.0			
1,4-Dichlorobenzene	1.3702	1.3918 1.3934	1.3847 1.5195	1.3931 1.4621	1.4004	Ave		1.4144				3.6		20.0			
Benzyl alcohol	0.8690	0.7943 0.8669	0.8290 0.9479	0.8400 0.9124	0.8755	Ave		0.8669				5.5		20.0			
1,2-Dichlorobenzene	1.3072	1.2633 1.3284	1.3245 1.4478	1.3193 1.3855	1.3099	Ave		1.3357				4.2		20.0			
2-Methylphenol	1.2094	1.1392 1.2057	1.1816 1.2960	1.2548 1.2584	1.2318	Ave		1.2221			0.7000	4.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Indene	2.2456	2.2487 2.2299	2.2925 2.3733	2.3356 2.2676	2.3077	Ave		2.2876				2.2		20.0			
bis (2-chloroisopropyl) ether	1.8329	1.8999 1.8060	1.9961 1.8837	1.9955 1.8056	1.9153	Ave		1.8919				4.0		20.0			
3 & 4 Methylphenol	1.2654	1.1835 1.2711	1.2385 1.3840	1.2745 1.3211	1.2797	Ave		1.2772				4.6		20.0			
N-Nitrosodi-n-propylamine	1.0880	1.0064 1.0797	1.0858 1.1429	1.1140 1.0884	1.1093	Ave		1.0893			0.5000	3.6		20.0			
Acetophenone	1.8161	1.8344 1.8205	1.8648 1.9375	1.8859 1.8771	1.8549	Ave		1.8614			0.0100	2.1		20.0			
Hexachloroethane	0.5738	0.5384 0.5722	0.5279 0.6222	0.5685 0.5967	0.5658	Ave		0.5707			0.3000	5.2		20.0			
Nitrobenzene	0.3795	0.3602 0.3806	0.3640 0.4117	0.3842 0.3977	0.3794	Ave		0.3821			0.2000	4.4		20.0			
Isophorone	0.6819	0.6383 0.6856	0.6464 0.7386	0.6607 0.7169	0.6727	Ave		0.6801			0.4000	5.0		20.0			
2-Nitrophenol	0.1640	0.1228 0.1677	0.1360 0.1821	0.1455 0.1806	0.1597	Ave		0.1573			0.1000	13.0		20.0			
2,4-Dimethylphenol	0.3070	0.3085 0.3072	0.3098 0.3345	0.3169 0.3276	0.3177	Ave		0.3162			0.2000	3.2		20.0			
Benzoic acid	0.1543	+++++ 0.1600	0.1209 0.2129	0.1276	0.1400	Qua	0.2369	0.0608	0.0035						0.9930		0.9900
Bis(2-chloroethoxy)methane	0.3978	0.3828 0.3947	0.3982 0.4265	0.3939 0.4131	0.3944	Ave		0.4002			0.3000	3.4		20.0			
2,4-Dichlorophenol	0.2427	0.2244 0.2447	0.2259 0.2704	0.2259 0.2673	0.2386	Ave		0.2425			0.2000	7.5		20.0			
1,2,4-Trichlorobenzene	0.2509	0.2393 0.2544	0.2468 0.2767	0.2449 0.2721	0.2457	Ave		0.2538				5.3		20.0			
Naphthalene	1.0404 0.9013	0.9168 0.9052	0.9118 0.9868	0.9204 0.9647	0.8964	Ave		0.9382			0.7000	5.2		20.0			
4-Chloroaniline	0.3925	0.3749 0.3968	0.3898 0.4332	0.3882 0.4216	0.4005	Ave		0.3997			0.0100	4.7		20.0			
Hexachlorobutadiene	0.1338	0.1318 0.1393	0.1368 0.1538	0.1383 0.1489	0.1343	Ave		0.1396			0.0100	5.6		20.0			
Caprolactam	0.0836	0.0856 0.0819	0.0930 0.0888	0.0977 0.0854	0.0993	Ave		0.0894			0.0100	7.3		20.0			
4-Chloro-3-methylphenol	0.2800	0.2575 0.2812	0.2699 0.3047	0.2643 0.2965	0.2754	Ave		0.2787			0.2000	5.7		20.0			
2-Methylnaphthalene	0.6985 0.6220	0.5801 0.6321	0.6121 0.6844	0.6205 0.6745	0.6149	Ave		0.6377			0.4000	6.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1-Methylnaphthalene	0.6251 0.5821	0.5425 0.5856	0.5789 0.6381	0.5824 0.6245	0.5804	Ave		0.5933				5.1		20.0			
Hexachlorocyclopentadiene	 0.2295	0.1311 0.2549	0.1498 0.3024	0.1639 0.2967	0.2046	Lin	-0.334	0.3035			0.0500				0.9900		0.9900
1,2,4,5-Tetrachlorobenzene	 0.4148	0.4080 0.4251	0.4042 0.4829	0.3977 0.4661	0.4060	Ave		0.4256			0.0100	7.4		20.0			
2,4,6-Trichlorophenol	 0.2835	0.2346 0.2929	0.2497 0.3268	0.2638 0.3119	0.2742	Ave		0.2797			0.2000	11.0		20.0			
2,4,5-Trichlorophenol	 0.2997	0.2603 0.3049	0.2722 0.3372	0.2832 0.3255	0.2958	Ave		0.2973			0.2000	8.7		20.0			
1,1'-Biphenyl	1.3340 1.2737	1.2335 1.2737	1.2361 1.4224	1.2978 1.3575	1.2619	Ave		1.2990			0.0100	4.8		20.0			
2-Chloronaphthalene	1.0392 0.9524	0.9310 0.9462	0.9243 1.0656	0.9329 1.0254	0.9378	Ave		0.9728			0.8000	5.6		20.0			
2-Nitroaniline	 0.3702	0.3049 0.3717	0.3291 0.4048	0.3431 0.3845	0.3648	Ave		0.3591			0.0100	8.9		20.0			
Dimethyl phthalate	 1.1176	1.0733 1.1170	1.0942 1.2352	1.1037 1.1983	1.0999	Ave		1.1299			0.0100	5.0		20.0			
1,3-Dinitrobenzene	 0.1797	0.1160 0.1850	0.1260 0.2067	0.1469 0.1990	0.1698	Ave		0.1661				20.0		20.0			
2,6-Dinitrotoluene	 0.2531	0.2060 0.2549	0.2170 0.2777	0.2446 0.2736	0.2486	Ave		0.2470				10.0		20.0			
Acenaphthylene	1.5153 1.6301	1.4639 1.6484	1.5139 1.8093	1.5397 1.7463	1.5970	Ave		1.6071			0.9000	7.1		20.0			
3-Nitroaniline	 0.3133	0.2570 0.3139	0.2794 0.3516	0.2919 0.3368	0.3107	Ave		0.3068			0.0100	9.9		20.0			
Acenaphthene	1.1625 1.0080	1.0063 1.0179	0.9849 1.1242	1.0159 1.0659	1.0026	Ave		1.0431			0.9000	5.9		20.0			
2,4-Dinitrophenol	 0.1129	+++++ 0.1247	+++++ 0.1520	0.0536 0.1461	0.0872	Lin	-0.693	0.1599			0.0100				0.9900		0.9900
4-Nitrophenol	 0.1804	0.1220 0.1845	0.1527 0.1997	0.1693 0.1914	0.1805	Ave		0.1726				14.0		20.0			
2,4-Dinitrotoluene	 0.3286	0.2456 0.3342	0.2870 0.3697	0.3021 0.3597	0.3226	Ave		0.3187			0.2000	13.0		20.0			
Dibenzofuran	1.5214 1.3443	1.3159 1.3816	1.3359 1.5051	1.3505 1.4629	1.3487	Ave		1.3963			0.8000	5.6		20.0			
2,3,4,6-Tetrachlorophenol	 0.2427	0.1692 0.2501	0.1915 0.2812	0.2160 0.2710	0.2278	Ave		0.2312			0.0100	17.0		20.0			
Diethyl phthalate	 1.1998	1.3530 1.1914	1.2986 1.2887	1.2164 1.2197	1.1983	Ave		1.2457			0.0100	4.8		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
4-Chlorophenyl phenyl ether	0.4814	0.4663 0.4958	0.4634 0.5594	0.4658 0.5309	0.4830	Ave		0.4932			0.4000	7.0		20.0			
4-Nitroaniline	0.3196	0.2550 0.3221	0.2783 0.3554	0.2904 0.3417	0.3119	Ave		0.3093			0.0100	11.0		20.0			
Fluorene	1.2029 1.1520	1.0840 1.1613	1.1329 1.2892	1.1164 1.2221	1.1319	Ave		1.1658			0.9000	5.4		20.0			
4,6-Dinitro-2-methylphenol	0.0982	+++++ 0.1043	+++++ 0.1261	0.0573 0.1248	0.0844	Lin1	-0.347	0.1268			0.0100				0.9910		0.9900
N-Nitrosodiphenylamine	0.5429	0.5005 0.5504	0.5118 0.6078	0.5265 0.5909	0.5209	Ave		0.5440			0.0100	7.0		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	0.9456	0.8476 0.9411	0.9204 1.0384	0.9342 0.9991	0.9376	Ave		0.9459				5.9		20.0			
Azobenzene	0.9456	0.8476 0.9410	0.9204 1.0387	0.9368 0.9991	0.9376	Ave		0.9459				5.9		20.0			
4-Bromophenyl phenyl ether	0.1686	0.1464 0.1722	0.1526 0.1961	0.1568 0.1898	0.1603	Ave		0.1679			0.1000	10.0		20.0			
Hexachlorobenzene	0.1734 0.1723	0.1426 0.1745	0.1546 0.2073	0.1571 0.2016	0.1647	Ave		0.1720			0.1000	12.0		20.0			
Atrazine	0.1885	0.1599 0.1874	0.1689 0.2089	0.1744 0.2037	0.1811	Ave		0.1841			0.0100	9.1		20.0			
Pentachlorophenol	0.1189	0.0603 0.1260	0.0769 0.1481	0.0915 0.1450	0.1062	Lin1	-0.125	0.1399			0.0500				0.9910		0.9900
Phenanthrene	1.1912 0.9886	0.9371 0.9995	0.9622 1.1233	0.9672 1.0942	0.9755	Ave		1.0266			0.7000	8.5		20.0			
Anthracene	0.9588 1.0238	0.8711 1.0376	0.9143 1.1588	0.9543 1.1371	0.9888	Ave		1.0050			0.7000	9.5		20.0			
Carbazole	0.9669	0.8872 0.9757	0.9441 1.0941	0.9411 1.0704	0.9372	Ave		0.9771			0.0100	7.2		20.0			
Di-n-butyl phthalate	1.3431	1.1555 1.3354	1.2341 1.4980	1.2317 1.4438	1.2911	Ave		1.3166			0.0100	8.7		20.0			
Fluoranthene	1.0730 1.0404	0.8511 1.0556	0.9220 1.2143	0.9589 1.1758	0.9850	Ave		1.0307			0.6000	11.0		20.0			
Benzidine	0.4176	0.2295 0.4204	0.2853 0.4256	0.3476 0.4145	0.4125	Ave		0.3691				20.0		20.0			
Pyrene	1.1045 1.0153	0.8994 1.0390	0.9797 1.1336	0.9851 1.1061	0.9927	Ave		1.0284			0.6000	7.3		20.0			
Butyl benzyl phthalate	0.5617	0.4660 0.5733	0.5078 0.6171	0.5254 0.5967	0.5532	Ave		0.5502			0.0100	8.9		20.0			
3,3'-Dichlorobenzidine	0.3292	0.2315 0.3516	0.2565 0.4022	0.2710 0.4013	0.3036	Ave		0.3184			0.0100	20.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Bis(2-ethylhexyl) phthalate	0.7919	0.6168 0.8123	0.7127 0.8744	0.7237 0.8502	0.7855	Ave		0.7709			0.0100	11.0		20.0			
Benzo[a]anthracene	1.1079 0.9230	0.8283 0.9522	0.8714 1.0401	0.8901 1.0182	0.9107	Ave		0.9491			0.8000	9.5		20.0			
Chrysene	1.0093 0.8365	0.7943 0.8544	0.8350 0.9574	0.8427 0.9423	0.8183	Ave		0.8767			0.7000	8.4		20.0			
Di-n-octyl phthalate	1.7758	1.1447 1.8756	1.2560 2.0554	1.4210 2.0340	1.6579	Lin1	-0.684	1.9908			0.0100				0.9960		0.9900
Benzo[b]fluoranthene	1.2096 1.1183	0.8837 1.2085	0.9900 1.3827	1.0460 1.3583	1.0771	Ave		1.1416			0.7000	14.0		20.0			
Benzo[k]fluoranthene	1.2781 1.2246	1.1169 1.2562	1.0941 1.4090	1.1285 1.4010	1.1787	Ave		1.2319			0.7000	9.5		20.0			
Benzo[a]pyrene	0.9526 1.0638	0.8408 1.1392	0.8869 1.2781	0.9628 1.2712	1.0195	Ave		1.0461			0.7000	15.0		20.0			
Indeno[1,2,3-cd]pyrene	0.7171 1.0736	0.8657 1.2039	0.8776 1.3796	0.9328 1.3967	1.0178	Lin	-1.052	1.3882			0.5000				0.9910		0.9900
Dibenz(a,h)anthracene	0.6978 0.8917	0.5419 0.9972	0.7085 1.1527	0.7342 1.1775	0.8335	Lin	-0.966	1.1673			0.4000				0.9900		0.9900
Benzo[g,h,i]perylene	0.7647 0.8737	0.7464 0.9699	0.7684 1.0960	0.7849 1.1272	0.8423	Ave		0.8859			0.5000	16.0		20.0			
2-Fluorophenol (Surr)	1.2453	1.2979 1.2514	1.2472 1.3700	1.2642 1.3318	1.2367	Ave		1.2806				3.8		20.0			
Phenol-d5 (Surr)	1.6332	1.7186 1.6123	1.6550 1.7699	1.6958 1.7074	1.6474	Ave		1.6799				3.1		20.0			
Nitrobenzene-d5 (Surr)	0.5380 0.3854	0.3563 0.3878	0.3617 0.4206	0.3725 0.4083	0.3837	Ave		0.4016				14.0		20.0			
2-Fluorobiphenyl (Surr)	1.6334 1.1432	1.1181 1.1576	1.1230 1.2849	1.1389 1.2284	1.1306	Ave		1.2176				14.0		20.0			
2,4,6-Tribromophenol (Surr)	0.1210	0.0972 0.1281	0.0980 0.1479	0.1019 0.1368	0.1159	Ave		0.1184				16.0		20.0			
Terphenyl-d14 (Surr)	1.0039 0.6985	0.7012 0.7250	0.6901 0.8136	0.6776 0.7832	0.6853	Ave		0.7532				14.0		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-83888/18	0428018.D
Level 2	STD2 240-83888/17	0428017.D
Level 3	STD3 240-83888/16	0428016.D
Level 4	STD4 240-83888/15	0428015.D
Level 5	STD5 240-83888/14	0428014.D
Level 6	STD6 240-83888/13	0428013.D
Level 7	STD7 240-83888/12	0428012.D
Level 8	STD8 240-83888/11	0428011.D
Level 9	STD9 240-83888/10	0428010.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	334509	21039 463524	41539 683920	67449 735680	164769	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	502182	28054 712743	55244 1066061	92875 1132402	245508	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	847818	36993 1197828	98131 1765194	161719 1877166	416326	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	17586 1445284	87706 1989597	172240 2822398	282948 2859123	739298	0.200 20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Phenol	DCB	Ave	1026922	62434 1437508	119653 2139615	193845 2248619	513002	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1308140	74088 1832383	147237 2686879	245146 2841675	650345	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	819793	48776 1152867	95867 1705123	161193 1788355	408374	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	788519	44047 1107145	86715 1626737	146199 1717614	385266	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	851939	51187 1208112	98453 1766481	163042 1880039	423374	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCB	Ave	857521	52650 1217767	99512 1801655	162196 1894344	430118	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzyl alcohol	DCB	Ave	543875	30048 757614	59571 1123885	97800 1182181	268881	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2-Dichlorobenzene	DCB	Ave	818086	47791 1160949	95181 1716640	153596 1795073	402317	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylphenol	DCB	Ave	756904	43097 1053665	84913 1536726	146089 1630468	378321	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Indene	DCB	Ave	2810796	170132 3897537	329493 5628124	543844 5875847	1417499	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
bis (2-chloroisopropyl) ether	DCB	Ave	1147094	71872 1578368	143447 2233488	232320 2339358	588249	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3 & 4 Methylphenol	DCB	Ave	791937	44771 1110892	89000 1640971	148379 1711662	393038	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodi-n-propylamine	DCB	Ave	680903	38072 943595	78027 1355106	129692 1410198	340711	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acetophenone	DCB	Ave	1136618	69393 1590970	134013 2297262	219570 2432087	569691	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachloroethane	DCB	Ave	359082	20367 500085	37936 737794	66187 773145	173786	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene	NPT	Ave	973792	54990 1349726	107961 1979626	186683 2059018	486758	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Isophorone	NPT	Ave	1749801	97459 2431534	191726 3551640	321081 3711398	863010	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitrophenol	NPT	Ave	420828	18748 594769	40347 875517	70708 935035	204906	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dimethylphenol	NPT	Ave	787807	47099 1089495	91905 1608552	153997 1695822	407641	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Qua	792047	+++++ 1135161	71741 2047499	123970	359227	20.0	+++++ 30.0	2.00 40.0	4.00	10.0
Bis(2-chloroethoxy)methane	NPT	Ave	1020788	58450 1399926	118113 2050677	191400 2138777	505952	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dichlorophenol	NPT	Ave	622942	34263 867979	67002 1300009	109772 1383621	306048	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,2,4-Trichlorobenzene	NPT	Ave	643886	36535 902215	73198 1330323	118989 1408490	315250	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Naphthalene	NPT	Ave	27002 2312975	139983 3210077	270471 4745053	447255 4993947	1149994	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chloroaniline	NPT	Ave	1007336	57243 1407193	115613 2083052	188661 2182402	513852	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobutadiene	NPT	Ave	343381	20121 494121	40593 739633	67219 771004	172270	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Caprolactam	NPT	Ave	429159	26135 580764	55177 853943	94958 884037	254830	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
4-Chloro-3-methylphenol	NPT	Ave	718652	39318 997168	80070 1465100	128449 1534962	353292	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Methylnaphthalene	NPT	Ave	18129 1596290	88576 2241623	181566 3291088	301510 3491747	788903	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1-Methylnaphthalene	NPT	Ave	16224 1493849	82836 2076919	171709 3068431	283037 3232745	744571	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorocyclopentadiene	ANT	Lin	334099	11339 514047	25419 815859	45309 869256	148994	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI

GC/MS SEMI VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,4,5-Tetrachlorobenzene	ANT	Ave	603955	35289 857188	68613 1302628	109919 1365644	295626	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Trichlorophenol	ANT	Ave	412720	20295 590586	42386 881443	72897 913765	199694	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,5-Trichlorophenol	ANT	Ave	436450	22510 614683	46204 909608	78263 953725	215374	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,1'-Biphenyl	ANT	Ave	19689 1854595	106688 2568208	209810 3836830	358678 3976938	918885	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chloronaphthalene	ANT	Ave	15337 1386796	80519 1907741	156890 2874378	257837 3003963	682905	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Nitroaniline	ANT	Ave	539051	26367 749535	55859 1091820	94814 1126474	265647	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dimethyl phthalate	ANT	Ave	1627351	92833 2252104	185722 3331916	305024 3510591	800944	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dinitrobenzene	ANT	Ave	261701	10032 372991	21387 557638	40595 583077	123642	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,6-Dinitrotoluene	ANT	Ave	368501	17816 514000	36836 749099	67605 801681	181049	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acenaphthylene	ANT	Ave	22365 2373543	126616 3323601	256951 4880738	425533 5116018	1162847	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3-Nitroaniline	ANT	Ave	456151	22225 632885	47425 948343	80677 986807	226257	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Acenaphthene	ANT	Ave	17158 1467635	87038 2052476	167160 3032576	280780 3122648	730062	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4-Dinitrophenol	ANT	Lin	328716	+++++ 502778	+++++ 820123	29609 856036	126978	20.0	+++++ 30.0	+++++ 40.0	4.00 50.0	10.0
4-Nitrophenol	ANT	Ave	525277	21100 743876	51832 1077492	93559 1121749	262899	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
2,4-Dinitrotoluene	ANT	Ave	478523	21241 673881	48721 997245	83493 1053692	234903	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dibenzofuran	ANT	Ave	22454 1957314	113812 2785691	226751 4060137	373256 4285851	982096	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,3,4,6-Tetrachlorophenol	ANT	Ave	353331	14638 504314	32509 758595	59689 794057	165840	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Diethyl phthalate	ANT	Ave	1747013	117025 2402165	220415 3476296	336179 3573245	872529	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Chlorophenyl phenyl ether	ANT	Ave	700944	40334 999660	78654 1508916	128733 1555295	351697	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Nitroaniline	ANT	Ave	465420	22056 649465	47238 958721	80265 1001117	227099	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluorene	ANT	Ave	17753 1677429	93752 2341483	192294 3477716	308533 3580260	824195	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4,6-Dinitro-2-methylphenol	PHN	Lin1	446020	+++++ 663740	+++++ 1059716	51000 1123250	196714	20.0	+++++ 30.0	+++++ 40.0	4.00 50.0	10.0
N-Nitrosodiphenylamine	PHN	Ave	2465715	143766 3502901	281025 5109130	468589 5318666	1214696	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
1,2-Diphenylhydrazine(as Azobenzene)	PHN	Ave	2147327	121727 2994369	252691 4364301	415675 4496742	1093134	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Azobenzene	PHN	Ave	2147327	121727 2994221	252691 4365483	416835 4496778	1093134	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
4-Bromophenyl phenyl ether	PHN	Ave	382939	21023 548062	41898 823973	69757 854338	186906	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Hexachlorobenzene	PHN	Ave	4067 391335	20478 555360	42454 871326	69901 907401	192035	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Atrazine	PHN	Ave	856333	45919 1192764	92755 1756327	155167 1833792	422348	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Pentachlorophenol	PHN	Lin1	540010	17314 801822	42219 1244656	81440 1304797	247529	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Phenanthrene	PHN	Ave	27939 2244918	134582 3180291	264179 4721091	430393 4924766	1137381	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Anthracene	PHN	Ave	22488 2324962	125102 3301624	251024 4870107	424625 5117743	1152864	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Carbazole	PHN	Ave	2195766	127408 3104419	259195 4598249	418750 4817461	1092741	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-butyl phthalate	PHN	Ave	3050084	165938 4249055	338816 6295734	548054 6498199	1505262	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Fluoranthene	PHN	Ave	25165 2362490	122229 3358657	253127 5103509	426686 5292033	1148392	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzidine	CRY	Ave	2018170	64954 2803638	155722 3925066	311573 4095670	995538	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Pyrene	CRY	Ave	25037 2453475	127273 3464359	267388 5227884	441511 5464251	1197814	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Butyl benzyl phthalate	CRY	Ave	1357426	65948 1911727	138587 2845716	235500 2947950	667530	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3,3'-Dichlorobenzidine	CRY	Ave	1590943	65529 2344793	140019 3709570	242961 3965231	732533	20.0	1.00 30.0	2.00 40.0	4.00 50.0	10.0
Bis(2-ethylhexyl) phthalate	CRY	Ave	1913760	87284 2708578	194524 4032202	324341 4200052	947821	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[a]anthracene	CRY	Ave	25114 2230526	117212 3174915	237812 4796542	398917 5030166	1098892	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Chrysene	CRY	Ave	22878 2021459	112402 2848991	227885 4415185	377701 4655216	987355	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Di-n-octyl phthalate	PRY	Lin1	3084892	117086 4465285	246780 6726655	449453 7126718	1432250	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 83888

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/28/2013 20:10 Calibration End Date: 04/28/2013 23:05 Calibration ID: 14885

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzo[b]fluoranthene	PRY	Ave	20050 1942657	90390 2877089	194508 4525074	330851 4759268	930533	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[k]fluoranthene	PRY	Ave	21186 2127384	114244 2990768	214958 4611239	356943 4908981	1018302	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[a]pyrene	PRY	Ave	15790 1848021	85997 2712243	174248 4182697	304524 4454162	880774	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Indeno[1,2,3-cd]pyrene	PRY	Lin	11887 1865094	88545 2866202	172421 4515039	295039 4893974	879300	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Dibenz(a,h)anthracene	PRY	Lin	11567 1549093	55427 2374084	139201 3772237	232222 4125870	720018	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzo[g,h,i]perylene	PRY	Ave	12675 1517827	76344 2309212	150963 3586854	248251 3949563	727637	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorophenol (Surr)	DCB	Ave	779396	49097 1093621	89629 1624377	147180 1725541	379838	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Phenol-d5 (Surr)	DCB	Ave	1022112	65013 1409055	118933 2098594	197428 2212116	505958	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Nitrobenzene-d5 (Surr)	NPT	Ave	13964 989086	54406 1375445	107292 2022476	180998 2113650	492291	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Fluorobiphenyl (Surr)	ANT	Ave	24108 1664565	96702 2333984	190599 3466047	314764 3598768	823244	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2,4,6-Tribromophenol (Surr)	ANT	Ave	176123	8410 258302	16637 398911	28150 400902	84430	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Terphenyl-d14 (Surr)	CRY	Ave	22756 1687991	99238 2417357	188341 3752081	303677 3869052	826863	0.100 10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

Curve Type Legend:

Ave = Average ISTD
Lin = Linear ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICV 240-83888/19 Calibration Date: 04/28/2013 23:26

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0428019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5574	0.5628		10.1	10.0	1.0	30.0
N-Nitrosodimethylamine	Ave	0.8123	0.8239		10.1	10.0	1.4	30.0
Pyridine	Ave	1.344	1.461		10.9	10.0	8.7	30.0
Benzaldehyde	Ave	1.194	1.234	0.0100	20.7	20.0	3.4	30.0
Phenol	Ave	1.685	1.797	0.8000	10.7	10.0	6.7	30.0
Aniline	Ave	2.110	2.209		10.5	10.0	4.7	30.0
Bis(2-chloroethyl)ether	Ave	1.348	1.400	0.7000	10.4	10.0	3.8	30.0
2-Chlorophenol	Ave	1.263	1.343	0.8000	10.6	10.0	6.3	30.0
1,3-Dichlorobenzene	Ave	1.398	1.466		10.5	10.0	4.8	30.0
1,4-Dichlorobenzene	Ave	1.414	1.503		10.6	10.0	6.3	30.0
Benzyl alcohol	Ave	0.8669	0.9399		10.8	10.0	8.4	30.0
1,2-Dichlorobenzene	Ave	1.336	1.420		10.6	10.0	6.3	30.0
2-Methylphenol	Ave	1.222	1.317	0.7000	10.8	10.0	7.8	30.0
bis (2-chloroisopropyl) ether	Ave	1.892	1.924		7.32	7.20	1.7	30.0
Indene	Ave	2.288	2.429		21.2	20.0	6.2	30.0
3 & 4 Methylphenol	Ave	1.277	1.346		10.5	10.0	5.4	30.0
N-Nitrosodi-n-propylamine	Ave	1.089	1.166	0.5000	10.7	10.0	7.0	30.0
Acetophenone	Ave	1.861	1.971	0.0100	10.6	10.0	5.9	30.0
Hexachloroethane	Ave	0.5707	0.6134	0.3000	10.7	10.0	7.5	30.0
Nitrobenzene	Ave	0.3821	0.4125	0.2000	10.8	10.0	7.9	30.0
Isophorone	Ave	0.6801	0.7568	0.4000	11.1	10.0	11.3	30.0
2-Nitrophenol	Ave	0.1573	0.1728	0.1000	11.0	10.0	9.8	30.0
2,4-Dimethylphenol	Ave	0.3162	0.3186	0.2000	10.1	10.0	0.8	30.0
Benzoic acid	Qua		0.1812		23.5	20.0	17.6	30.0
Bis(2-chloroethoxy)methane	Ave	0.4002	0.4146	0.3000	10.4	10.0	3.6	30.0
2,4-Dichlorophenol	Ave	0.2425	0.2561	0.2000	10.6	10.0	5.6	30.0
1,2,4-Trichlorobenzene	Ave	0.2538	0.2694		10.6	10.0	6.1	30.0
Naphthalene	Ave	0.9382	0.9771	0.7000	10.4	10.0	4.1	30.0
4-Chloroaniline	Ave	0.3997	0.4120	0.0100	10.3	10.0	3.1	30.0
Hexachlorobutadiene	Ave	0.1396	0.1427	0.0100	10.2	10.0	2.2	30.0
Caprolactam	Ave	0.0894	0.0974	0.0100	21.8	20.0	8.9	30.0
4-Chloro-3-methylphenol	Ave	0.2787	0.3015	0.2000	10.8	10.0	8.2	30.0
2-Methylnaphthalene	Ave	0.6377	0.6545	0.4000	10.3	10.0	2.6	30.0
1-Methylnaphthalene	Ave	0.5933	0.6176		10.4	10.0	4.1	30.0
Hexachlorocyclopentadiene	Lin		0.2470	0.0500	9.24	10.0	-7.6	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4256	0.4429	0.0100	10.4	10.0	4.1	30.0
2,4,6-Trichlorophenol	Ave	0.2797	0.3087	0.2000	11.0	10.0	10.4	30.0
2,4,5-Trichlorophenol	Ave	0.2973	0.3178	0.2000	10.7	10.0	6.9	30.0
1,1'-Biphenyl	Ave	1.299	1.379	0.0100	10.6	10.0	6.2	30.0
2-Chloronaphthalene	Ave	0.9728	1.017	0.8000	10.5	10.0	4.6	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICV 240-83888/19 Calibration Date: 04/28/2013 23:26

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0428019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3591	0.3917	0.0100	10.9	10.0	9.1	30.0
Dimethyl phthalate	Ave	1.130	1.202	0.0100	10.6	10.0	6.4	30.0
1,3-Dinitrobenzene	Ave	0.1661	0.1826		11.0	10.0	9.9	30.0
2,6-Dinitrotoluene	Ave	0.2470	0.2736		11.1	10.0	10.8	30.0
Acenaphthylene	Ave	1.607	1.782	0.9000	11.1	10.0	10.9	30.0
3-Nitroaniline	Ave	0.3068	0.3259	0.0100	10.6	10.0	6.2	30.0
Acenaphthene	Ave	1.043	1.110	0.9000	10.6	10.0	6.4	30.0
2,4-Dinitrophenol	Lin		0.1028	0.0100	17.2	20.0	-14.1	30.0
4-Nitrophenol	Ave	0.1726	0.1926		22.3	20.0	11.6	30.0
2,4-Dinitrotoluene	Ave	0.3187	0.3520	0.2000	11.0	10.0	10.5	30.0
Dibenzofuran	Ave	1.396	1.468	0.8000	10.5	10.0	5.1	30.0
2,3,4,6-Tetrachlorophenol	Ave	0.2312	0.2477	0.0100	10.7	10.0	7.1	30.0
Diethyl phthalate	Ave	1.246	1.292	0.0100	10.4	10.0	3.7	30.0
4-Chlorophenyl phenyl ether	Ave	0.4932	0.5217	0.4000	10.6	10.0	5.8	30.0
4-Nitroaniline	Ave	0.3093	0.3362	0.0100	10.9	10.0	8.7	30.0
Fluorene	Ave	1.166	1.261	0.9000	10.8	10.0	8.1	30.0
4,6-Dinitro-2-methylphenol	Linl		0.1043	0.0100	19.2	20.0	-4.1	30.0
N-Nitrosodiphenylamine	Ave	0.5440	0.5901	0.0100	21.7	20.0	8.5	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9459	1.070		11.3	10.0	13.1	30.0
Azobenzene	Ave	0.9459	1.070		11.3	10.0	13.1	30.0
4-Bromophenyl phenyl ether	Ave	0.1679	0.1876	0.1000	11.2	10.0	11.7	30.0
Hexachlorobenzene	Ave	0.1720	0.1866	0.1000	10.8	10.0	8.5	30.0
Atrazine	Ave	0.1841	0.2093	0.0100	22.7	20.0	13.7	30.0
Pentachlorophenol	Linl		0.1327	0.0500	19.9	20.0	-0.7	30.0
Phenanthrene	Ave	1.027	1.122	0.7000	10.9	10.0	9.3	30.0
Anthracene	Ave	1.005	1.154	0.7000	11.5	10.0	14.9	30.0
Carbazole	Ave	0.9771	1.071	0.0100	11.0	10.0	9.6	30.0
Di-n-butyl phthalate	Ave	1.317	1.503	0.0100	11.4	10.0	14.1	30.0
Fluoranthene	Ave	1.031	1.146	0.6000	11.1	10.0	11.1	30.0
Benzidine	Ave	0.3691	0.4515		24.5	20.0	22.3	30.0
Pyrene	Ave	1.028	1.144	0.6000	11.1	10.0	11.2	30.0
Butyl benzyl phthalate	Ave	0.5502	0.6538	0.0100	11.9	10.0	18.8	30.0
3,3'-Dichlorobenzidine	Ave	0.3184	0.3603	0.0100	22.6	20.0	13.2	30.0
Bis(2-ethylhexyl) phthalate	Ave	0.7709	0.9016	0.0100	11.7	10.0	16.9	30.0
Benzo[a]anthracene	Ave	0.9491	1.045	0.8000	11.0	10.0	10.1	30.0
Chrysene	Ave	0.8767	0.9805	0.7000	11.2	10.0	11.8	30.0
Di-n-octyl phthalate	Linl		2.011	0.0100	10.4	10.0	4.4	30.0
Benzo[b]fluoranthene	Ave	1.142	1.243	0.7000	10.9	10.0	8.9	30.0
Benzo[k]fluoranthene	Ave	1.232	1.365	0.7000	11.1	10.0	10.8	30.0
Benzo[a]pyrene	Ave	1.046	1.162	0.7000	11.1	10.0	11.1	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICV 240-83888/19 Calibration Date: 04/28/2013 23:26

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0428019.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin		1.131	0.5000	8.90	10.0	-11.0	30.0
Dibenz(a,h)anthracene	Lin		0.9674	0.4000	9.12	10.0	-8.8	30.0
Benzo[g,h,i]perylene	Ave	0.8859	0.9784	0.5000	11.0	10.0	10.4	30.0
2-Fluorophenol (Surr)	Ave	1.281	1.455		11.4	10.0	13.6	30.0
Phenol-d5 (Surr)	Ave	1.680	1.931		11.5	10.0	15.0	30.0
Nitrobenzene-d5 (Surr)	Ave	0.4016	0.4646		11.6	10.0	15.7	30.0
2-Fluorobiphenyl (Surr)	Ave	1.218	1.352		11.1	10.0	11.0	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1184	0.1356		11.5	10.0	14.5	30.0
Terphenyl-d14 (Surr)	Ave	0.7532	0.8621		11.4	10.0	14.5	30.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: A4AG2 Start Date: 05/07/2013 07:13

Analysis Batch Number: 84912 End Date: 05/07/2013 15:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-84912/1		05/07/2013 07:13	1	0507001.D	RXI-5SILMS 0.45(mm)
STD6 240-84912/2 CCVIS		05/07/2013 07:31	1	0507002.D	RXI-5SILMS 0.45(mm)
STD6 240-84912/3 CCV		05/07/2013 07:53	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/07/2013 08:15	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/07/2013 08:36	1		RXI-5SILMS 0.45(mm)
MB 240-84624/23-A		05/07/2013 08:58	1	0507006.D	RXI-5SILMS 0.45(mm)
LCS 240-84624/24-A		05/07/2013 09:20	1	0507007.D	RXI-5SILMS 0.45(mm)
240-23812-2	MRC-MW41A-042913	05/07/2013 14:28	1	0507021.D	RXI-5SILMS 0.45(mm)
240-23812-3	MRC-MW98A-042913	05/07/2013 14:50	1	0507022.D	RXI-5SILMS 0.45(mm)
240-23812-6	MRC-MW-111A-042913	05/07/2013 15:56	1	0507025.D	RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: 0507001.D DFTPP Injection Date: 05/07/2013

Instrument ID: A4AG2 DFTPP Injection Time: 07:13

Analysis Batch No.: 84912

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	49.9	
68	Less than 2.0% of mass 69	0.8	(1.5)1
69	Mass 69 relative abundance	53.3	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	58.5	
197	Less than 1.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.5	
275	10.0- 30.0% of mass 198	23.0	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	7.3	
442	40.0 - 110.0% of mass 198	50.9	
443	15.0 - 24.0% of mass 442	9.5	(18.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-84912/2	0507002.D	05/07/2013	07:31
	MB 240-84624/23-A	0507006.D	05/07/2013	08:58
	LCS 240-84624/24-A	0507007.D	05/07/2013	09:20
MRC-MW41A-042913	240-23812-2	0507021.D	05/07/2013	14:28
MRC-MW98A-042913	240-23812-3	0507022.D	05/07/2013	14:50
MRC-MW-111A-042913	240-23812-6	0507025.D	05/07/2013	15:56

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: STD6 240-84912/2 Calibration Date: 05/07/2013 07:31

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0507002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5574	0.4676		8.39	10.0	-16.1	20.0
N-Nitrosodimethylamine	Ave	0.8123	0.6883		8.47	10.0	-15.3	20.0
Pyridine	Ave	1.344	1.192		8.87	10.0	-11.3	20.0
Benzaldehyde	Ave	1.194	0.9812	0.0100	16.4	20.0	-17.8	20.0
Phenol	Ave	1.685	1.464	0.8000	8.69	10.0	-13.1	20.0
Aniline	Ave	2.110	1.849		8.77	10.0	-12.3	20.0
Bis(2-chloroethyl)ether	Ave	1.348	1.184	0.7000	8.78	10.0	-12.2	20.0
2-Chlorophenol	Ave	1.263	1.212	0.8000	9.60	10.0	-4.0	20.0
1,3-Dichlorobenzene	Ave	1.398	1.337		9.56	10.0	-4.4	20.0
1,4-Dichlorobenzene	Ave	1.414	1.344		9.50	10.0	-5.0	20.0
Benzyl alcohol	Ave	0.8669	0.7696		8.88	10.0	-11.2	20.0
1,2-Dichlorobenzene	Ave	1.336	1.285		9.62	10.0	-3.8	20.0
2-Methylphenol	Ave	1.222	1.107	0.7000	9.06	10.0	-9.4	20.0
bis (2-chloroisopropyl) ether	Ave	1.892	1.481		7.83	10.0	-21.7*	20.0
Indene	Ave	2.288	2.173		19.0	20.0	-5.0	20.0
3 & 4 Methylphenol	Ave	1.277	1.151		9.01	10.0	-9.9	20.0
N-Nitrosodi-n-propylamine	Ave	1.089	0.9241	0.5000	8.48	10.0	-15.2	20.0
Acetophenone	Ave	1.861	1.698	0.0100	9.12	10.0	-8.8	20.0
Hexachloroethane	Ave	0.5707	0.5401	0.3000	9.46	10.0	-5.4	20.0
Nitrobenzene	Ave	0.3821	0.3445	0.2000	9.02	10.0	-9.8	20.0
Isophorone	Ave	0.6801	0.6063	0.4000	8.91	10.0	-10.9	20.0
2-Nitrophenol	Ave	0.1573	0.1632	0.1000	10.4	10.0	3.8	20.0
2,4-Dimethylphenol	Ave	0.3162	0.3015	0.2000	9.53	10.0	-4.7	20.0
Benzoic acid	Qua		0.1750		23.0	20.0	14.8	20.0
Bis(2-chloroethoxy)methane	Ave	0.4002	0.3637	0.3000	9.09	10.0	-9.1	20.0
2,4-Dichlorophenol	Ave	0.2425	0.2480	0.2000	10.2	10.0	2.3	20.0
1,2,4-Trichlorobenzene	Ave	0.2538	0.2563		10.1	10.0	1.0	20.0
Naphthalene	Ave	0.9382	0.8876	0.7000	9.46	10.0	-5.4	20.0
4-Chloroaniline	Ave	0.3997	0.3910	0.0100	9.78	10.0	-2.2	20.0
Hexachlorobutadiene	Ave	0.1396	0.1446	0.0100	10.4	10.0	3.6	20.0
Caprolactam	Ave	0.0894	0.0973	0.0100	21.8	20.0	8.8	20.0
4-Chloro-3-methylphenol	Ave	0.2787	0.2646	0.2000	9.49	10.0	-5.1	20.0
2-Methylnaphthalene	Ave	0.6377	0.6229	0.4000	9.77	10.0	-2.3	20.0
1-Methylnaphthalene	Ave	0.5933	0.5861		9.88	10.0	-1.2	20.0
Hexachlorocyclopentadiene	Lin		0.2564	0.0500	9.55	10.0	-4.5	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4256	0.4177	0.0100	9.82	10.0	-1.8	20.0
2,4,6-Trichlorophenol	Ave	0.2797	0.2821	0.2000	10.1	10.0	0.9	20.0
2,4,5-Trichlorophenol	Ave	0.2973	0.2965	0.2000	9.97	10.0	-0.3	20.0
1,1'-Biphenyl	Ave	1.299	1.264	0.0100	9.73	10.0	-2.7	20.0
2-Chloronaphthalene	Ave	0.9728	0.9491	0.8000	9.76	10.0	-2.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: STD6 240-84912/2 Calibration Date: 05/07/2013 07:31

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0507002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3591	0.3131	0.0100	8.72	10.0	-12.8	20.0
Dimethyl phthalate	Ave	1.130	1.095	0.0100	9.69	10.0	-3.1	20.0
1,3-Dinitrobenzene	Ave	0.1661	0.1817		10.9	10.0	9.4	20.0
2,6-Dinitrotoluene	Ave	0.2470	0.2526		10.2	10.0	2.3	20.0
Acenaphthylene	Ave	1.607	1.588	0.9000	9.88	10.0	-1.2	20.0
3-Nitroaniline	Ave	0.3068	0.2962	0.0100	9.65	10.0	-3.5	20.0
2,4-Dinitrophenol	Lin		0.1523	0.0100	23.4	20.0	16.9	20.0
Acenaphthene	Ave	1.043	1.017	0.9000	9.75	10.0	-2.5	20.0
4-Nitrophenol	Ave	0.1726	0.1798		20.8	20.0	4.2	20.0
2,4-Dinitrotoluene	Ave	0.3187	0.3436	0.2000	10.8	10.0	7.8	20.0
Dibenzofuran	Ave	1.396	1.360	0.8000	9.74	10.0	-2.6	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2312	0.2419	0.0100	10.5	10.0	4.6	20.0
Diethyl phthalate	Ave	1.246	1.177	0.0100	9.45	10.0	-5.5	20.0
4-Chlorophenyl phenyl ether	Ave	0.4932	0.4926	0.4000	9.99	10.0	-0.1	20.0
4-Nitroaniline	Ave	0.3093	0.3045	0.0100	9.85	10.0	-1.5	20.0
Fluorene	Ave	1.166	1.143	0.9000	9.80	10.0	-2.0	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1150	0.0100	20.9	20.0	4.4	20.0
N-Nitrosodiphenylamine	Ave	0.5440	0.5200	0.0100	19.1	20.0	-4.4	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9459	0.7934		8.39	10.0	-16.1	20.0
Azobenzene	Ave	0.9459	0.7934		8.39	10.0	-16.1	20.0
4-Bromophenyl phenyl ether	Ave	0.1679	0.1670	0.1000	9.95	10.0	-0.5	20.0
Hexachlorobenzene	Ave	0.1720	0.1675	0.1000	9.73	10.0	-2.7	20.0
Atrazine	Ave	0.1841	0.1817	0.0100	19.7	20.0	-1.3	20.0
Pentachlorophenol	Lin1		0.1274	0.0500	19.1	20.0	-4.5	20.0
Phenanthrene	Ave	1.027	0.9698	0.7000	9.45	10.0	-5.5	20.0
Anthracene	Ave	1.005	1.003	0.7000	9.98	10.0	-0.2	20.0
Carbazole	Ave	0.9771	0.9433	0.0100	9.65	10.0	-3.5	20.0
Di-n-butyl phthalate	Ave	1.317	1.259	0.0100	9.56	10.0	-4.4	20.0
Fluoranthene	Ave	1.031	1.018	0.6000	9.88	10.0	-1.2	20.0
Benzidine	Ave	0.3691	0.4296		23.3	20.0	16.4	20.0
Pyrene	Ave	1.028	1.002	0.6000	9.74	10.0	-2.6	20.0
Butyl benzyl phthalate	Ave	0.5502	0.5329	0.0100	9.69	10.0	-3.1	20.0
3,3'-Dichlorobenzidine	Ave	0.3184	0.3309	0.0100	20.8	20.0	3.9	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.7709	0.7660	0.0100	9.94	10.0	-0.6	20.0
Benzo[a]anthracene	Ave	0.9491	0.9011	0.8000	9.49	10.0	-5.1	20.0
Chrysene	Ave	0.8767	0.8473	0.7000	9.66	10.0	-3.4	20.0
Di-n-octyl phthalate	Lin1		1.621	0.0100	8.49	10.0	-15.1	20.0
Benzo[b]fluoranthene	Ave	1.142	1.039	0.7000	9.10	10.0	-9.0	20.0
Benzo[k]fluoranthene	Ave	1.232	1.195	0.7000	9.70	10.0	-3.0	20.0
Benzo[a]pyrene	Ave	1.046	1.044	0.7000	9.98	10.0	-0.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: STD6 240-84912/2 Calibration Date: 05/07/2013 07:31

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0507002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin		1.151	0.5000	9.05	10.0	-9.5	20.0
Dibenz(a,h)anthracene	Lin		0.9642	0.4000	9.09	10.0	-9.1	20.0
Benzo[g,h,i]perylene	Ave	0.8859	0.9786	0.5000	11.0	10.0	10.5	20.0
2-Fluorophenol (Surr)	Ave	1.281	1.136		8.87	10.0	-11.3	20.0
Phenol-d5 (Surr)	Ave	1.680	1.465		8.72	10.0	-12.8	20.0
Nitrobenzene-d5 (Surr)	Ave	0.4016	0.3532		8.79	10.0	-12.1	20.0
2-Fluorobiphenyl (Surr)	Ave	1.218	1.162		9.55	10.0	-4.5	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1184	0.1159		9.79	10.0	-2.1	20.0
Terphenyl-d14 (Surr)	Ave	0.7532	0.6835		9.07	10.0	-9.3	20.0

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: A4AG2 Start Date: 05/08/2013 11:39

Analysis Batch Number: 85157 End Date: 05/08/2013 21:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-85157/1		05/08/2013 11:39	1	0508001.D	RXI-5SILMS 0.45(mm)
STD6 240-85157/2 CCVIS		05/08/2013 11:56	1	0508002.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/08/2013 12:18	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/08/2013 12:40	1		RXI-5SILMS 0.45(mm)
240-23812-4	MRC-MW98B-042913	05/08/2013 13:46	4	0508007.D	RXI-5SILMS 0.45(mm)
240-23812-7	MRC-MW-111B-042913	05/08/2013 21:05	2	0508027.D	RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: 0508001.D DFTPP Injection Date: 05/08/2013

Instrument ID: A4AG2 DFTPP Injection Time: 11:39

Analysis Batch No.: 85157

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	48.5	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	56.6	
197	Less than 1.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.1	
275	10.0- 30.0% of mass 198	24.0	
365	Greater than 0.75% of mass 198	3.0	
441	Present, but less than mass 443	8.5	
442	40.0 - 110.0% of mass 198	57.3	
443	15.0 - 24.0% of mass 442	11.0	(19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD6 240-85157/2	0508002.D	05/08/2013	11:56
MRC-MW98B-042913	240-23812-4	0508007.D	05/08/2013	13:46
MRC-MW-111B-042913	240-23812-7	0508027.D	05/08/2013	21:05

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: STD6 240-85157/2 Calibration Date: 05/08/2013 11:56

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5574	0.4991		8.95	10.0	-10.5	20.0
N-Nitrosodimethylamine	Ave	0.8123	0.7037		8.66	10.0	-13.4	20.0
Pyridine	Ave	1.344	1.192		8.87	10.0	-11.3	20.0
Benzaldehyde	Ave	1.194	1.008	0.0100	16.9	20.0	-15.5	20.0
Phenol	Ave	1.685	1.465	0.8000	8.70	10.0	-13.0	20.0
Aniline	Ave	2.110	1.849		8.77	10.0	-12.3	20.0
Bis(2-chloroethyl)ether	Ave	1.348	1.167	0.7000	8.66	10.0	-13.4	20.0
2-Chlorophenol	Ave	1.263	1.205	0.8000	9.54	10.0	-4.6	20.0
1,3-Dichlorobenzene	Ave	1.398	1.328		9.50	10.0	-5.0	20.0
1,4-Dichlorobenzene	Ave	1.414	1.346		9.52	10.0	-4.8	20.0
Benzyl alcohol	Ave	0.8669	0.7640		8.81	10.0	-11.9	20.0
1,2-Dichlorobenzene	Ave	1.336	1.262		9.45	10.0	-5.5	20.0
2-Methylphenol	Ave	1.222	1.084	0.7000	8.87	10.0	-11.3	20.0
bis (2-chloroisopropyl) ether	Ave	1.892	1.488		7.86	10.0	-21.4*	20.0
Indene	Ave	2.288	2.151		18.8	20.0	-5.9	20.0
3 & 4 Methylphenol	Ave	1.277	1.162		9.09	10.0	-9.1	20.0
N-Nitrosodi-n-propylamine	Ave	1.089	0.9161	0.5000	8.41	10.0	-15.9	20.0
Acetophenone	Ave	1.861	1.666	0.0100	8.95	10.0	-10.5	20.0
Hexachloroethane	Ave	0.5707	0.5447	0.3000	9.54	10.0	-4.6	20.0
Nitrobenzene	Ave	0.3821	0.3538	0.2000	9.26	10.0	-7.4	20.0
Isophorone	Ave	0.6801	0.6049	0.4000	8.89	10.0	-11.1	20.0
2-Nitrophenol	Ave	0.1573	0.1651	0.1000	10.5	10.0	4.9	20.0
2,4-Dimethylphenol	Ave	0.3162	0.2981	0.2000	9.43	10.0	-5.7	20.0
Benzoic acid	Qua		0.1804		23.4	20.0	17.2	20.0
Bis(2-chloroethoxy)methane	Ave	0.4002	0.3715	0.3000	9.28	10.0	-7.2	20.0
2,4-Dichlorophenol	Ave	0.2425	0.2526	0.2000	10.4	10.0	4.2	20.0
1,2,4-Trichlorobenzene	Ave	0.2538	0.2602		10.2	10.0	2.5	20.0
Naphthalene	Ave	0.9382	0.9057	0.7000	9.65	10.0	-3.5	20.0
4-Chloroaniline	Ave	0.3997	0.3959	0.0100	9.91	10.0	-0.9	20.0
Hexachlorobutadiene	Ave	0.1396	0.1453	0.0100	10.4	10.0	4.1	20.0
Caprolactam	Ave	0.0894	0.0890	0.0100	19.9	20.0	-0.5	20.0
4-Chloro-3-methylphenol	Ave	0.2787	0.2664	0.2000	9.56	10.0	-4.4	20.0
2-Methylnaphthalene	Ave	0.6377	0.6267	0.4000	9.83	10.0	-1.7	20.0
1-Methylnaphthalene	Ave	0.5933	0.5856		9.87	10.0	-1.3	20.0
Hexachlorocyclopentadiene	Lin		0.2676	0.0500	9.92	10.0	-0.8	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4256	0.4274	0.0100	10.0	10.0	0.4	20.0
2,4,6-Trichlorophenol	Ave	0.2797	0.2867	0.2000	10.3	10.0	2.5	20.0
2,4,5-Trichlorophenol	Ave	0.2973	0.3095	0.2000	10.4	10.0	4.1	20.0
1,1'-Biphenyl	Ave	1.299	1.288	0.0100	9.92	10.0	-0.8	20.0
2-Chloronaphthalene	Ave	0.9728	0.9782	0.8000	10.1	10.0	0.6	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: STD6 240-85157/2 Calibration Date: 05/08/2013 11:56

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Nitroaniline	Ave	0.3591	0.3183	0.0100	8.86	10.0	-11.4	20.0
Dimethyl phthalate	Ave	1.130	1.099	0.0100	9.73	10.0	-2.7	20.0
1,3-Dinitrobenzene	Ave	0.1661	0.1820		11.0	10.0	9.5	20.0
2,6-Dinitrotoluene	Ave	0.2470	0.2558		10.4	10.0	3.6	20.0
Acenaphthylene	Ave	1.607	1.613	0.9000	10.0	10.0	0.4	20.0
3-Nitroaniline	Ave	0.3068	0.2973	0.0100	9.69	10.0	-3.1	20.0
Acenaphthene	Ave	1.043	1.027	0.9000	9.85	10.0	-1.5	20.0
2,4-Dinitrophenol	Lin		0.1562	0.0100	23.9	20.0	19.4	20.0
4-Nitrophenol	Ave	0.1726	0.1822		21.1	20.0	5.6	20.0
2,4-Dinitrotoluene	Ave	0.3187	0.3384	0.2000	10.6	10.0	6.2	20.0
Dibenzofuran	Ave	1.396	1.372	0.8000	9.83	10.0	-1.7	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2312	0.2416	0.0100	10.4	10.0	4.5	20.0
Diethyl phthalate	Ave	1.246	1.181	0.0100	9.48	10.0	-5.2	20.0
4-Chlorophenyl phenyl ether	Ave	0.4932	0.4932	0.4000	10.0	10.0	-0.0	20.0
4-Nitroaniline	Ave	0.3093	0.3110	0.0100	10.1	10.0	0.5	20.0
Fluorene	Ave	1.166	1.154	0.9000	9.90	10.0	-1.0	20.0
4,6-Dinitro-2-methylphenol	Lin1		0.1149	0.0100	20.9	20.0	4.3	20.0
N-Nitrosodiphenylamine	Ave	0.5440	0.5103	0.0100	18.8	20.0	-6.2	20.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	0.9459	0.8101		8.56	10.0	-14.4	20.0
Azobenzene	Ave	0.9459	0.8101		8.56	10.0	-14.4	20.0
4-Bromophenyl phenyl ether	Ave	0.1679	0.1634	0.1000	9.73	10.0	-2.7	20.0
Hexachlorobenzene	Ave	0.1720	0.1664	0.1000	9.67	10.0	-3.3	20.0
Atrazine	Ave	0.1841	0.1834	0.0100	19.9	20.0	-0.4	20.0
Pentachlorophenol	Lin1		0.1263	0.0500	18.9	20.0	-5.3	20.0
Phenanthrene	Ave	1.027	0.9799	0.7000	9.55	10.0	-4.5	20.0
Anthracene	Ave	1.005	1.013	0.7000	10.1	10.0	0.8	20.0
Carbazole	Ave	0.9771	0.9657	0.0100	9.88	10.0	-1.2	20.0
Di-n-butyl phthalate	Ave	1.317	1.250	0.0100	9.49	10.0	-5.1	20.0
Fluoranthene	Ave	1.031	1.015	0.6000	9.84	10.0	-1.6	20.0
Benzidine	Ave	0.3691	0.4285		23.2	20.0	16.1	20.0
Pyrene	Ave	1.028	1.003	0.6000	9.75	10.0	-2.5	20.0
Butyl benzyl phthalate	Ave	0.5502	0.5300	0.0100	9.63	10.0	-3.7	20.0
3,3'-Dichlorobenzidine	Ave	0.3184	0.3345	0.0100	21.0	20.0	5.1	20.0
Bis(2-ethylhexyl) phthalate	Ave	0.7709	0.7635	0.0100	9.90	10.0	-1.0	20.0
Benzo[a]anthracene	Ave	0.9491	0.9097	0.8000	9.59	10.0	-4.1	20.0
Chrysene	Ave	0.8767	0.8380	0.7000	9.56	10.0	-4.4	20.0
Di-n-octyl phthalate	Lin1		1.617	0.0100	8.47	10.0	-15.3	20.0
Benzo[b]fluoranthene	Ave	1.142	1.080	0.7000	9.46	10.0	-5.4	20.0
Benzo[k]fluoranthene	Ave	1.232	1.150	0.7000	9.34	10.0	-6.6	20.0
Benzo[a]pyrene	Ave	1.046	1.043	0.7000	9.97	10.0	-0.3	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: STD6 240-85157/2 Calibration Date: 05/08/2013 11:56

Instrument ID: A4AG2 Calib Start Date: 04/28/2013 20:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/28/2013 23:05

Lab File ID: 0508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin		1.155	0.5000	9.08	10.0	-9.2	20.0
Dibenz(a,h)anthracene	Lin		0.9490	0.4000	8.96	10.0	-10.4	20.0
Benzo[g,h,i]perylene	Ave	0.8859	0.9735	0.5000	11.0	10.0	9.9	20.0
2-Fluorophenol (Surr)	Ave	1.281	1.130		8.82	10.0	-11.8	20.0
Phenol-d5 (Surr)	Ave	1.680	1.445		8.60	10.0	-14.0	20.0
Nitrobenzene-d5 (Surr)	Ave	0.4016	0.3647		9.08	10.0	-9.2	20.0
2-Fluorobiphenyl (Surr)	Ave	1.218	1.171		9.62	10.0	-3.8	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1184	0.1132		9.56	10.0	-4.4	20.0
Terphenyl-dl4 (Surr)	Ave	0.7532	0.6781		9.00	10.0	-10.0	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab File ID: 0507006.D Lab Sample ID: MB 240-84624/23-A

Matrix: Water Date Extracted: 05/03/2013 10:40

Instrument ID: A4AG2 Date Analyzed: 05/07/2013 08:58

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-84624/24-A	0507007.D	05/07/2013 09:20
MRC-MW41A-042913	240-23812-2	0507021.D	05/07/2013 14:28
MRC-MW98A-042913	240-23812-3	0507022.D	05/07/2013 14:50
MRC-MW-111A-042913	240-23812-6	0507025.D	05/07/2013 15:56
MRC-MW98B-042913	240-23812-4	0508007.D	05/08/2013 13:46
MRC-MW-111B-042913	240-23812-7	0508027.D	05/08/2013 21:05

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-84624/23-A

Matrix: Water | Lab File ID: 0507006.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1000(mL) | Date Analyzed: 05/07/2013 08:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 84912 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	60		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	61		21-110
1718-51-0	Terphenyl-d14 (Surr)	47		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0507007.D

Lab ID: LCS 240-84624/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.2	61	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD6 240-83888/13 Date Analyzed: 04/28/2013 21:15

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0428013.D Heated Purge: (Y/N) N

Calibration ID: 14885

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		250339	5.95	1026477	7.06	582421	8.55
UPPER LIMIT		500678	6.45	2052954	7.56	1164842	9.05
LOWER LIMIT		125170	5.45	513239	6.56	291211	8.05
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-83888/19		177757	5.95	723722	7.06	413603	8.55
STD6 240-84912/2 CCVIS		202519	6.00	797367	7.11	461424	8.61
STD6 240-85157/2 CCVIS		209752	5.98	804859	7.10	457348	8.60

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD6 240-83888/13 Date Analyzed: 04/28/2013 21:15

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0428013.D Heated Purge: (Y/N) N

Calibration ID: 14885

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		908339	9.81	966633	12.38	694885	14.45
UPPER LIMIT		1816678	10.31	1933266	12.88	1389770	14.95
LOWER LIMIT		454170	9.31	483317	11.88	347443	13.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-83888/19		625433	9.82	647682	12.38	463741	14.45
STD6 240-84912/2 CCVIS		745323	9.87	790495	12.46	610827	14.56
STD6 240-85157/2 CCVIS		736076	9.86	777785	12.44	592551	14.54

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD6 240-84912/2 Date Analyzed: 05/07/2013 07:31

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0507002.D Heated Purge: (Y/N) N

Calibration ID: 14889

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		202519	6.00	797367	7.11	461424	8.61
UPPER LIMIT		405038	6.50	1594734	7.61	922848	9.11
LOWER LIMIT		101260	5.50	398684	6.61	230712	8.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84624/23-A		177147	6.00	700578	7.11	397307	8.61
LCS 240-84624/24-A		173580	6.00	686285	7.11	382491	8.61
240-23812-2	MRC-MW41A-042913	204571	6.00	827714	7.11	477217	8.61
240-23812-3	MRC-MW98A-042913	205558	6.00	825764	7.11	484322	8.61
240-23812-6	MRC-MW-111A-042913	196521	6.00	802615	7.11	469755	8.61

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD6 240-84912/2 Date Analyzed: 05/07/2013 07:31

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0507002.D Heated Purge: (Y/N) N

Calibration ID: 14889

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		745323	9.87	790495	12.46	610827	14.56
UPPER LIMIT		1490646	10.37	1580990	12.96	1221654	15.06
LOWER LIMIT		372662	9.37	395248	11.96	305414	14.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84624/23-A		685247	9.87	695920	12.45	565158	14.55
LCS 240-84624/24-A		648642	9.87	713321	12.45	560627	14.55
240-23812-2	MRC-MW41A-042913	824807	9.87	854626	12.45	702684	14.55
240-23812-3	MRC-MW98A-042913	834243	9.87	856145	12.45	708389	14.55
240-23812-6	MRC-MW-111A-042913	805186	9.87	833542	12.45	682468	14.55

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD6 240-85157/2 Date Analyzed: 05/08/2013 11:56

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0508002.D Heated Purge: (Y/N) N

Calibration ID: 14889

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		209752	5.98	804859	7.10	457348	8.60
UPPER LIMIT		419504	6.48	1609718	7.60	914696	9.10
LOWER LIMIT		104876	5.48	402430	6.60	228674	8.10
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-23812-4	MRC-MW98B-042913	164600	5.98	664057	7.10	356107	8.59
240-23812-7	MRC-MW-111B-042913	207759	5.98	816094	7.10	441316	8.59

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: STD6 240-85157/2 Date Analyzed: 05/08/2013 11:56

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0508002.D Heated Purge: (Y/N) N

Calibration ID: 14889

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		736076	9.86	777785	12.44	592551	14.54
UPPER LIMIT		1472152	10.36	1555570	12.94	1185102	15.04
LOWER LIMIT		368038	9.36	388893	11.94	296276	14.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-23812-4	MRC-MW98B-042913	603152	9.86	602807	12.43	475214	14.53
240-23812-7	MRC-MW-111B-042913	738843	9.86	723546	12.44	568929	14.53

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84624 Batch Start Date: 05/03/13 12:30 Batch Analyst: Matthews, Brandon

Batch Method: 3520C Batch End Date: 05/04/13 06:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	EXBNALCS1 00035	EXBNASURRW 00025
240-23812-F-2	MRC-MW41A-042913	3520C, 8270D	T	1000 mL	2 mL	7	2		1 mL
240-23812-E-3	MRC-MW98A-042913	3520C, 8270D	T	1040 mL	2 mL	7	2		1 mL
240-23812-F-4	MRC-MW98B-042913	3520C, 8270D	T	1010 mL	2 mL	7	2		1 mL
240-23812-F-7	MRC-MW-111B-042913	3520C, 8270D	T	1020 mL	2 mL	7	2		1 mL
240-23812-D-6	MRC-MW-111A-042913	3520C, 8270D	T	1050 mL	2 mL	7	2		1 mL
MB 240-84624/23		3520C, 8270D		1000 mL	2 mL	7	2		1 mL
LCS 240-84624/24		3520C, 8270D		1000 mL	2 mL	7	2	1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXRESTEKSPKW 00019					
240-23812-F-2	MRC-MW41A-042913	3520C, 8270D	T						
240-23812-E-3	MRC-MW98A-042913	3520C, 8270D	T						
240-23812-F-4	MRC-MW98B-042913	3520C, 8270D	T						
240-23812-F-7	MRC-MW-111B-042913	3520C, 8270D	T						
240-23812-D-6	MRC-MW-111A-042913	3520C, 8270D	T						
MB 240-84624/23		3520C, 8270D							
LCS 240-84624/24		3520C, 8270D		1 mL					

Batch Notes	
Acid used for pH adjust Lot #	711898
Na2SO4 Lot Number	963863
Prep Solvent Lot #	966868

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

SAMPLE ID MRC-MW98B-042913

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST	IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	CONCENTRATION PPB
164600	4	346264	4	2000	0.5574	119.57
			Amt. inj	Sample Volume (ML)		
			1	1010		

1,4-Dioxane = 120 ug/L

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW98B-042913 | Lab Sample ID: 240-23812-4

Matrix: Water | Lab File ID: 0508007.D

Analysis Method: 8270D | Date Collected: 04/29/2013 14:20

Extract. Method: 3520C | Date Extracted: 05/03/2013 10:40

Sample wt/vol: 1010(mL) | Date Analyzed: 05/08/2013 13:46

Con. Extract Vol.: 2(mL) | Dilution Factor: 4

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85157 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	120		4.0	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	71		20-110
367-12-4	2-Fluorophenol (Surr)	64		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	59		21-110
4165-62-2	Phenol-d5 (Surr)	67		21-110
1718-51-0	Terphenyl-d14 (Surr)	59		24-110

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4AG2\20130508-19647.b\0508007.D		
Lims ID:	240-23812-F-4-A	Client ID:	MRC-MW98B-042913
Inject. Date:	08-May-2013 13:46:30	Dil. Factor:	4.0000
Sample Type:	Client		
Sample ID:	240-0019647-007		
Misc. Info.:	240-23812-F-4-A		
Operator:		Instrument ID:	A4AG2
Injection Vol:	1.0 ul	ALS Bottle#:	7
Lims Batch ID:	85157	Lims Sample ID:	7
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20130508-19647.b\8270 ag2.m		
Last Update:	09-May-2013 06:52:44	Calib Date:	29-Apr-2013 02:21:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20130428-19341.b\0428027.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK010		
First Level Reviewer: hulat		Date:	08-May-2013 14:46:15

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	5.984	5.984	0.0	97	164600	4.00	
* 2 Naphthalene-d8	136	7.102	7.102	0.0	100	664057	4.00	
* 3 Acenaphthene-d10	164	8.594	8.599	-0.005	93	356107	4.00	
* 4 Phenanthrene-d10	188	9.862	9.862	0.0	97	603152	4.00	
* 5 Chrysene-d12	240	12.434	12.440	-0.006	97	602807	4.00	
* 6 Perylene-d12	264	14.531	14.536	-0.005	96	475214	4.00	
$ 7 2-Fluorophenol	112	4.727	4.727	0.0	89	125905	2.39	
$ 8 Phenol-d5	99	5.620	5.626	-0.006	98	173563	2.51	
$ 9 Nitrobenzene-d5	82	6.471	6.471	0.0	87	98875	1.48	
$ 10 2-Fluorobiphenyl (Surr)	172	8.006	8.011	-0.005	99	192077	1.77	
$ 11 2,4,6-Tribromophenol	330	9.263	9.263	0.0	85	31955	3.03	
$ 12 Terphenyl-d14	244	11.226	11.231	-0.005	96	166085	1.46	
26 1,4-Dioxane	88	2.523	2.523	0.0	94	346264	15.1	M

QC Flag Legend

Review Flags
M - Manually Integrated

Method RSK-175

Dissolved Gases (GC) by Method RSK_175

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MRC-MW-48A-042913	240-23812-5	109
MRC-MW-48A-042913	240-23812-5	105
	MB 240-84221/5	116
	MB 240-84393/5	108
	LCS 240-84221/4	115
	LCS 240-84393/4	111
MRC-MW-48A-042913 MS	240-23812-5 MS	103
MRC-MW-48A-042913 MSD	240-23812-5 MSD	106

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: ZPID Start Date: 01/18/2013 15:20

Analysis Batch Number: 72560 End Date: 01/18/2013 17:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-72560/2 IC		01/18/2013 15:20	1	Z0011802.D	
STD2 240-72560/3 IC		01/18/2013 15:32	1	Z0011803.D	
STD3 240-72560/4 IC		01/18/2013 15:44	1	Z0011804.D	
STD4 240-72560/5 IC		01/18/2013 15:57	1	Z0011805.D	
STD5 240-72560/6 IC		01/18/2013 16:09	1	Z0011806.D	
STD6 240-72560/7 ICRT		01/18/2013 16:21	1	Z0011807.D	
STD7 240-72560/8 IC		01/18/2013 16:33	1	Z0011808.D	
STD8 240-72560/9 IC		01/18/2013 16:45	1	Z0011809.D	
STD9 240-72560/10 IC		01/18/2013 16:58	1	Z0011810.D	
ICV 240-72560/11		01/18/2013 17:10	1	Z0011811.D	

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	153247 102893 103380	128183 103123	105364 105474	104494 105611	Ave		112418.756				15.0		30.0			
Ethene	96806 93671 91386	105381 93127	88894 94811	88696 94044	Ave		94090.5098				5.3		30.0			
Acetylene	24689 26208 30711	26581 27597	22760 32188	22861 29509	Ave		27011.6103				12.0		30.0			
Ethane	101411 102963 103364	112107 103379	95960 105521	96602 105534	Ave		102982.426				4.7		30.0			
Propene	78986 89968 88100	88423 89534	74666 91410	74390 90185	Ave		85073.4816				8.2		30.0			
Propane	92321 105760 106943	105081 106628	90712 108964	91379 108961	Ave		101860.977				7.8		30.0			
Propane, 2-methyl	83666 107682 109409	95313 108896	86769 111112	87421 111310	Ave		100175.232				12.0		30.0			
1,1,1-Trifluoroethane	31205 41006	35368 40303	36127	40135 41168	Ave		37901.8635				10.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton | Job No.: 240-23812-1 | Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID | GC Column: | ID: | Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 | Calibration End Date: 01/18/2013 16:58 | Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Methane	Ave	38438 11934310	123659 81376315	406582 36666789	1209668 159521463	3969261	0.251 116	0.965 772	3.86 347	11.6 1543	38.6
Ethene	Ave	42640 18928943	178527 128474180	602389 57345534	1803144 247666290	6346457	0.440 203	1.69 1355	6.78 610	20.3 2710	67.8
Acetylene	Ave	10063 5189958	41670 40355973	142717 16648752	430060 77009812	1642953	0.408 188	1.57 1254	6.27 564	18.8 2508	62.7
Ethane	Ave	47848 22508675	203442 153167226	696560 68933291	2103657 300072325	7472670	0.472 218	1.81 1452	7.26 653	21.8 2903	72.6
Propene	Ave	52126 27266136	224438 185584124	758081 82393900	2265818 357727706	9132788	0.660 305	2.54 2030	10.2 914	30.5 4060	102
Propane	Ave	63821 34014805	279391 231733482	964752 104277738	2915538 454872922	11246033	0.691 319	2.66 2127	10.6 957	31.9 4253	106
Propane, 2-methyl	Ave	76200 45765053	333875 311308529	1215789 140338679	3674766 613077945	15084964	0.911 420	3.50 2802	14.0 1261	42.0 5604	140
1,1,1-Trifluoroethane	Ave	2054100 367330855	8954283	36585949 500284541	121933404	249161727	65.8 9114	253	1013 12152	3038	6076

Curve Type Legend:

Ave = Average

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1 Analy Batch No.: 72560

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 01/18/2013 15:20 Calibration End Date: 01/18/2013 16:58 Calibration ID: 13357

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-72560/2	Z0011802.D
Level 2	STD2 240-72560/3	Z0011803.D
Level 3	STD3 240-72560/4	Z0011804.D
Level 4	STD4 240-72560/5	Z0011805.D
Level 5	STD5 240-72560/6	Z0011806.D
Level 6	STD6 240-72560/7	Z0011807.D
Level 7	STD8 240-72560/9	Z0011809.D
Level 8	STD7 240-72560/8	Z0011808.D
Level 9	STD9 240-72560/10	Z0011810.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Methane	0.912	0.912	0.910	0.909	0.909	0.909	0.909	0.910	0.909		0.859 - 0.959	0.910
Ethene	1.412	1.412	1.410	1.409	1.409	1.405	1.399	1.404	1.392		1.355 - 1.455	1.406
Acetylene	1.502	1.498	1.500	1.499	1.499	1.495	1.492	1.494	1.489		1.445 - 1.545	1.496
Ethane	1.688	1.685	1.687	1.685	1.682	1.682	1.669	1.677	1.655		1.482 - 1.882	1.679
Propene	3.592	3.592	3.590	3.589	3.585	3.582	3.542	3.564	3.512		3.532 - 3.632	3.572
Propane	3.785	3.785	3.784	3.782	3.779	3.772	3.735	3.757	3.705		3.722 - 3.822	3.765
Propane, 2-methyl	5.425	5.422	5.420	5.419	5.415	5.409	5.359	5.387	5.319		5.309 - 5.509	5.397
1,1,1-Trifluoroethane	2.728	2.725	2.720	2.705	2.685	2.672		2.657			2.572 - 2.772	2.699

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	105235		108	116	-6.4	30.0
Ethene	Ave	94091	94878		205	203	0.8	30.0
Acetylene	Ave	27012	29729		207	188	10.1	30.0
Ethane	Ave	102982	105260		223	218	2.2	30.0
Propene	Ave	85073	93015		333	305	9.3	30.0
Propane	Ave	101861	109606		342	318	7.6	30.0
Propane, 2-methyl	Ave	100175	111796		469	420	11.6	30.0
Butane	Lin1		108462		430	420	2.2	30.0
Pentane	Ave	37720	97267		1340	522	157.9*	30.0
1,1,1-Trifluoroethane	Ave	37902	41998		2700	2440	10.8	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICV 240-72560/11 Calibration Date: 01/18/2013 17:10

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0011811.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
Butane	5.76	5.66	5.86
Pentane	7.33	7.24	7.44
1,1,1-Trifluoroethane	2.71	2.57	2.77

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: ZPID Start Date: 05/01/2013 10:58

Analysis Batch Number: 84221 End Date: 05/01/2013 12:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-84221/3		05/01/2013 10:58	1	Z0050103.D	
LCS 240-84221/4		05/01/2013 11:10	1	Z0050104.D	
MB 240-84221/5		05/01/2013 11:22	1	Z0050105.D	
ZZZZZ		05/01/2013 11:34	1		
240-23812-5	MRC-MW-48A-042913	05/01/2013 11:46	1	Z0050107.D	
ZZZZZ		05/01/2013 11:59	1		
ZZZZZ		05/01/2013 12:11	1		
ZZZZZ		05/01/2013 12:23	1		

RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVRT 240-84221/3 Calibration Date: 05/01/2013 10:58

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0050103.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	100653		104	116	-10.5	30.0
Ethene	Ave	94091	90770		196	203	-3.5	30.0
Acetylene	Ave	27012	30140		210	188	11.6	30.0
Ethane	Ave	102982	96720		204	218	-6.1	30.0
Propene	Ave	85073	78282		280	305	-8.0	30.0
Propane	Ave	101861	92098		288	319	-9.6	30.0
Propane, 2-methyl	Ave	100175	89776		377	420	-10.4	30.0
1,1,1-Trifluoroethane	Ave	37902	42851		2750	2440	13.1	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVRT 240-84221/3 Calibration Date: 05/01/2013 10:58

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0050103.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.77	3.72	3.82
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: ZPID Start Date: 05/02/2013 08:53

Analysis Batch Number: 84393 End Date: 05/02/2013 10:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-84393/3		05/02/2013 08:53	1	Z0050203.D	
LCS 240-84393/4		05/02/2013 09:05	1	Z0050204.D	
MB 240-84393/5		05/02/2013 09:18	1	Z0050205.D	
240-23812-5	MRC-MW-48A-042913	05/02/2013 09:30	10	Z0050206.D	
240-23812-5 MS	MRC-MW-48A-042913 MS	05/02/2013 09:42	10	Z0050207.D	
240-23812-5 MSD	MRC-MW-48A-042913 MSD	05/02/2013 09:54	10	Z0050208.D	
ZZZZZ		05/02/2013 10:07	1		
ZZZZZ		05/02/2013 10:19	1		
ZZZZZ		05/02/2013 10:31	1		
ZZZZZ		05/02/2013 10:43	1		

RSK-175

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVRT 240-84393/3 Calibration Date: 05/02/2013 08:53

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0050203.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	112419	100955		104	116	-10.2	30.0
Ethene	Ave	94091	90850		196	203	-3.4	30.0
Acetylene	Ave	27012	30763		214	188	13.9	30.0
Ethane	Ave	102982	95823		203	218	-7.0	30.0
Propene	Ave	85073	77729		278	305	-8.6	30.0
Propane	Ave	101861	90565		284	319	-11.1	30.0
Propane, 2-methyl	Ave	100175	87939		369	420	-12.2	30.0
1,1,1-Trifluoroethane	Ave	37902	41755		2680	2440	10.2	30.0

FORM VII
GC VOA CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVRT 240-84393/3 Calibration Date: 05/02/2013 08:53

Instrument ID: ZPID Calib Start Date: 01/18/2013 15:20

GC Column: ID: Calib End Date: 01/18/2013 16:58

Lab File ID: Z0050203.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Methane	0.91	0.86	0.96
Ethene	1.41	1.36	1.46
Acetylene	1.50	1.45	1.55
Ethane	1.68	1.48	1.88
Propene	3.58	3.53	3.63
Propane	3.78	3.73	3.83
Propane, 2-methyl	5.41	5.31	5.51
1,1,1-Trifluoroethane	2.71	2.61	2.81

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: CCVRT 240-84221/3 Date Analyzed: 05/01/2013 10:58

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0050103.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.71		
UPPER LIMIT				2.76		
LOWER LIMIT				2.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-84221/3		05/01/2013 10:58	Z0050103.D	2.71		
LCS 240-84221/4		05/01/2013 11:10	Z0050104.D	2.71		
MB 240-84221/5		05/01/2013 11:22	Z0050105.D	2.70		
240-23812-5	MRC-MW-48A-042913	05/01/2013 11:46	Z0050107.D	2.71		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: MB 240-84221/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0050105.D Lab File ID:(2)

Date Analyzed:(1) 05/01/2013 11:22 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-84221/4	05/01/2013 11:10	
MRC-MW-48A-042913	240-23812-5	05/01/2013 11:46	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-84221/5

Matrix: Water Lab File ID: Z0050105.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 05/01/2013 11:22

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 84221 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.50	U	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	116		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0050104.D

Lab ID: LCS 240-84221/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	216	106	64-130	
Ethane	218	226	104	77-127	
Methane	116	111	96	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Sample No.: CCVRT 240-84393/3 Date Analyzed: 05/02/2013 08:53

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z0050203.D Heated Purge: (Y/N) N

Calibration ID: 13357

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				2.71		
UPPER LIMIT				2.76		
LOWER LIMIT				2.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-84393/3		05/02/2013 08:53	Z0050203.D	2.71		
LCS 240-84393/4		05/02/2013 09:05	Z0050204.D	2.71		
MB 240-84393/5		05/02/2013 09:18	Z0050205.D	2.71		
240-23812-5	MRC-MW-48A-042913	05/02/2013 09:30	Z0050206.D	2.71		
240-23812-5 MS	MRC-MW-48A-042913 MS	05/02/2013 09:42	Z0050207.D	2.71		
240-23812-5 MSD	MRC-MW-48A-042913 MSD	05/02/2013 09:54	Z0050208.D	2.71		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: MB 240-84393/5

Matrix: Water Date Extracted:

Lab File ID:(1) Z0050205.D Lab File ID:(2)

Date Analyzed:(1) 05/02/2013 09:18 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-84393/4	05/02/2013 09:05	
MRC-MW-48A-042913	240-23812-5	05/02/2013 09:30	
MRC-MW-48A-042913 MS	240-23812-5 MS	05/02/2013 09:42	
MRC-MW-48A-042913 MSD	240-23812-5 MSD	05/02/2013 09:54	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-84393/5

Matrix: Water Lab File ID: Z0050205.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 05/02/2013 09:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 84393 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.103	J	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	108		40-122

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0050204.D

Lab ID: LCS 240-84393/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	210	103	64-130	
Ethane	218	217	100	77-127	
Methane	116	106	92	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0050207.D

Lab ID: 240-23812-5 MS Client ID: MRC-MW-48A-042913 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	2030	12	1970	96	51-129	
Ethane	2180	28	2110	96	59-133	
Methane	1160	4800	5940	95	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0050208.D

Lab ID: 240-23812-5 MSD Client ID: MRC-MW-48A-042913 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	2030	2010	98	2	34	51-129	
Ethane	2180	2160	98	3	34	59-133	
Methane	1160	6310	127	6	42	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

SDG 240-23812
SAMPLE ID MRC-MW-48A-042913

SAMPLE CALC

INITIAL CF	DILUTION	COMPOUND OF INTEREST	Final Volume (UL)	CONCENTRATION PPB
112419	10	54417503	5000	4840.60

Sample Volume (ML)
5

TPH GRO 4800 ug/L

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Client Sample ID: MRC-MW-48A-042913 Lab Sample ID: 240-23812-5

Matrix: Water Lab File ID: Z0050206.D

Analysis Method: RSK-175 Date Collected: 04/29/2013 11:03

Sample wt/vol: 17(mL) Date Analyzed: 05/02/2013 09:30

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 84393 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	4800	B	5.0	0.98

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	105		40-122

TestAmerica Canton
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\ZPID\20130502-19463.b\Z0050206.D
Lims ID: 240-23812-E-5 Client ID: MRC-MW-48A-042913
Inject. Date: 02-May-2013 09:30:24 Dil. Factor: 10.0000
Sample Type: Client
Sample ID: 240-0019463-006
Misc. Info.:
Operator: 402582 Instrument ID: ZPID
Purge Vol: 1.000 mL ALS Bottle#: 1
Lims Batch ID: 84393 Lims Sample ID: 6
Detector 1 : GC ELC2B
Detector 2 : GC FID1A

Method: \\Ncchrom\ChromData\ZPID\20130502-19463.b\RSK175.m
Last Update: 02-May-2013 11:15:06 Calib Date: 18-Jan-2013 16:58:13
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\ZPID\20130118-16705.b\Z0011810.D
Limit Group: GCV RSK 175 ICAL
Integrator: Falcon
Column Type: Column Dia:
Process Host: XAWRK021

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
$ 15 Nitrous Oxide (Surr)						1
1		0.0				
14 Carbon dioxide						1
1		0.0				
1 Methane						
2	0.910	0.910	0.000	54417503	484.1	
2 Ethylene						
2	1.410	1.410	0.000	114289	1.21	
3 Acetylene						1
2		1.500				
4 Ethane						
2	1.687	1.683	0.004	285302	2.77	
$ 5 1,1,1-Trifluoroethane						
2	2.707	2.707	0.000	104328494	2752.6	
6 Propene						1
2		3.583				
7 Propane						1
2		3.777				
8 Propane, 2-methyl						1
2		5.410				

QC Flag Legend

Processing Flags
1 - Missing Peaks

6850

Perchlorate by LC/MS or LC/MS/MS

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Instrument ID: A5 Start Date: 05/09/2013 15:57

Analysis Batch Number: 16094 End Date: 05/10/2013 03:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ICB 320-16094/2		05/09/2013 15:57	1	09MAY13-Perc-004.d	Anion HR 4.6(mm)
STD01 320-16094/3 IC		05/09/2013 16:13	1	09MAY13-Perc-005.d	Anion HR 4.6(mm)
STD02 320-16094/4 IC		05/09/2013 16:30	1	09MAY13-Perc-006.d	Anion HR 4.6(mm)
STD03 320-16094/5 IC		05/09/2013 16:47	1	09MAY13-Perc-007.d	Anion HR 4.6(mm)
STD04 320-16094/6 ICISAV		05/09/2013 17:03	1	09MAY13-Perc-008.d	Anion HR 4.6(mm)
STD05 320-16094/7 IC		05/09/2013 17:20	1	09MAY13-Perc-009.d	Anion HR 4.6(mm)
STD06 320-16094/8 IC		05/09/2013 17:37	1	09MAY13-Perc-010.d	Anion HR 4.6(mm)
STD07 320-16094/9 IC		05/09/2013 17:54	1	09MAY13-Perc-011.d	Anion HR 4.6(mm)
STD08 320-16094/10 IC		05/09/2013 18:10	1	09MAY13-Perc-012.d	Anion HR 4.6(mm)
CCB 320-16094/11		05/09/2013 18:27	1	09MAY13-Perc-013.d	Anion HR 4.6(mm)
ICV 320-16094/12		05/09/2013 18:44	1	09MAY13-Perc-014.d	Anion HR 4.6(mm)
CCVL 320-16094/13		05/09/2013 19:00	1	09MAY13-Perc-015.d	Anion HR 4.6(mm)
MB 320-15942/1-A		05/09/2013 19:17	1	09MAY13-Perc-016.d	Anion HR 4.6(mm)
LCS 320-15942/2-A		05/09/2013 19:34	1	09MAY13-Perc-017.d	Anion HR 4.6(mm)
INF 320-15942/3-A		05/09/2013 19:50	1	09MAY13-Perc-018.d	Anion HR 4.6(mm)
240-23812-2	MRC-MW41A-042913	05/09/2013 20:07	1	09MAY13-Perc-019.d	Anion HR 4.6(mm)
240-23812-2 MS	MRC-MW41A-042913 MS	05/09/2013 20:24	1	09MAY13-Perc-020.d	Anion HR 4.6(mm)
240-23812-2 MSD	MRC-MW41A-042913 MSD	05/09/2013 20:41	1	09MAY13-Perc-021.d	Anion HR 4.6(mm)
ZZZZZ		05/09/2013 20:57	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 21:14	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 21:31	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 21:48	1		Anion HR 4.6(mm)
CCV 320-16094/24		05/09/2013 22:04	1	09MAY13-Perc-026.d	Anion HR 4.6(mm)
ZZZZZ		05/09/2013 22:21	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 22:38	10		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 22:54	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 23:11	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 23:28	1		Anion HR 4.6(mm)
ZZZZZ		05/09/2013 23:45	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 00:01	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 00:18	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 00:35	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 00:51	1		Anion HR 4.6(mm)
CCV 320-16094/35		05/10/2013 01:08	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 01:25	5		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 01:42	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 01:58	1		Anion HR 4.6(mm)

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LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Instrument ID: A5 Start Date: 05/09/2013 15:57

Analysis Batch Number: 16094 End Date: 05/10/2013 03:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/10/2013 02:15	1		Anion HR 4.6(mm)
ZZZZZ		05/10/2013 02:32	1		Anion HR 4.6(mm)
CCV 320-16094/41		05/10/2013 02:48	1		Anion HR 4.6(mm)
CCVL 320-16094/42		05/10/2013 03:05	1	09MAY13-Perc-044.d	Anion HR 4.6(mm)
CCB 320-16094/43		05/10/2013 03:22	1	09MAY13-Perc-045.d	Anion HR 4.6(mm)

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2013-05-09 14:55		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.00	112.99	0.10	0.01	Pass	0.66	0.70	0.10	-0.04	Pass	41654	0	Pass
302.01	302.00	0.10	0.01	Pass	0.67	0.70	0.10	-0.03	Pass	103561	0	Pass
602.01	601.98	0.10	0.03	Pass	0.64	0.70	0.10	-0.06	Pass	638015	0	Pass
1033.98	1033.99	0.10	-0.01	Pass	0.64	0.70	0.10	-0.06	Pass	422509	0	Pass
1333.96	1333.97	0.10	-0.01	Pass	0.65	0.70	0.10	-0.05	Pass	583909	0	Pass
1633.95	1633.95	0.10	0.00	Pass	0.63	0.70	0.10	-0.07	Pass	363057	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.05	112.99	0.10	0.06	Pass	0.65	0.70	0.10	-0.05	Pass	206812	0	Pass
302.04	302.00	0.10	0.04	Pass	0.65	0.70	0.10	-0.05	Pass	108960	0	Pass
602.04	601.98	0.10	0.06	Pass	0.63	0.70	0.10	-0.07	Pass	340847	0	Pass
1034.06	1033.99	0.10	0.07	Pass	0.62	0.70	0.10	-0.08	Pass	192854	0	Pass
1334.05	1333.97	0.10	0.08	Pass	0.62	0.70	0.10	-0.08	Pass	475003	0	Pass
1634.02	1633.95	0.10	0.07	Pass	0.61	0.70	0.10	-0.09	Pass	368281	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.30	0.02	Pass	1.15	1.20	0.60	-0.05	Pass	52209	0	Pass
301.90	302.00	0.30	-0.10	Pass	1.33	1.20	0.60	0.13	Pass	173433	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.33	1.20	0.60	0.13	Pass	1025151	0	Pass
1033.92	1033.99	0.30	-0.07	Pass	1.25	1.20	0.60	0.05	Pass	862885	0	Pass
1333.92	1333.97	0.30	-0.05	Pass	1.25	1.20	0.60	0.05	Pass	1611148	0	Pass
1633.92	1633.95	0.30	-0.03	Pass	1.17	1.20	0.60	-0.03	Pass	1526938	0	Pass

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.05	112.99	0.30	0.06	Pass	1.14	1.20	0.60	-0.06	Pass	271482	0	Pass
302.04	302.00	0.30	0.04	Pass	1.22	1.20	0.60	0.02	Pass	161519	0	Pass
601.99	601.98	0.30	0.01	Pass	1.23	1.20	0.60	0.03	Pass	519926	0	Pass
1034.01	1033.99	0.30	0.02	Pass	1.21	1.20	0.60	0.01	Pass	386459	0	Pass
1333.99	1333.97	0.30	0.02	Pass	1.21	1.20	0.60	0.01	Pass	931090	0	Pass
1634.03	1633.95	0.30	0.08	Pass	1.20	1.20	0.60	0.00	Pass	797602	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.50	-0.01	Pass	2.44	2.50	1.25	-0.06	Pass	61246	0	Pass
301.86	302.00	0.50	-0.14	Pass	2.66	2.50	1.25	0.16	Pass	226055	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.70	2.50	1.25	0.20	Pass	1223353	0	Pass
1033.91	1033.99	0.50	-0.08	Pass	2.59	2.50	1.25	0.09	Pass	1238256	0	Pass
1333.91	1333.97	0.50	-0.06	Pass	2.56	2.50	1.25	0.06	Pass	2479164	0	Pass
1633.93	1633.95	0.50	-0.02	Pass	2.44	2.50	1.25	-0.06	Pass	2642021	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.92	112.99	0.50	-0.07	Pass	2.56	2.50	1.25	0.06	Pass	334799	0	Pass
301.95	302.00	0.50	-0.05	Pass	2.58	2.50	1.25	0.08	Pass	233515	0	Pass
601.95	601.98	0.50	-0.03	Pass	2.55	2.50	1.25	0.05	Pass	900661	0	Pass
1034.05	1033.99	0.50	0.06	Pass	2.45	2.50	1.25	-0.05	Pass	810500	0	Pass
1334.03	1333.97	0.50	0.06	Pass	2.45	2.50	1.25	-0.05	Pass	1981384	0	Pass
1634.08	1633.95	0.50	0.13	Pass	2.40	2.50	1.25	-0.10	Pass	1958923	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1 Analy Batch No.: 16094

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2013 16:13 Calibration End Date: 05/09/2013 18:10 Calibration ID: 2812

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-16094/3	09MAY13-Perc-005.d
Level 2	STD02 320-16094/4	09MAY13-Perc-006.d
Level 3	STD03 320-16094/5	09MAY13-Perc-007.d
Level 4	STD04 320-16094/6	09MAY13-Perc-008.d
Level 5	STD05 320-16094/7	09MAY13-Perc-009.d
Level 6	STD06 320-16094/8	09MAY13-Perc-010.d
Level 7	STD07 320-16094/9	09MAY13-Perc-011.d
Level 8	STD08 320-16094/10	09MAY13-Perc-012.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Perchlorate	0.9263 0.7896	0.8095 0.8098	0.8304 0.8279	0.8127	0.7753	Ave		0.8227				5.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1 Analy Batch No.: 16094

SDG No.:

Instrument ID: A5 GC Column: Anion HR ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2013 16:13 Calibration End Date: 05/09/2013 18:10 Calibration ID: 2812

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD01 320-16094/3	09MAY13-Perc-005.d
Level 2	STD02 320-16094/4	09MAY13-Perc-006.d
Level 3	STD03 320-16094/5	09MAY13-Perc-007.d
Level 4	STD04 320-16094/6	09MAY13-Perc-008.d
Level 5	STD05 320-16094/7	09MAY13-Perc-009.d
Level 6	STD06 320-16094/8	09MAY13-Perc-010.d
Level 7	STD07 320-16094/9	09MAY13-Perc-011.d
Level 8	STD08 320-16094/10	09MAY13-Perc-012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Perchlorate	18OP	Ave	1635723 48166825	2486903 90639316	3909055 142227407	7677235	19108922	0.150 5.00	0.300 10.0	0.500 20.0	1.00	2.00

Curve Type Legend:
Ave = Average ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICV 320-16094/12 Calibration Date: 05/09/2013 18:44

Instrument ID: A5 Calib Start Date: 05/09/2013 16:13

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/09/2013 18:10

Lab File ID: 09MAY13-Perc-014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8227	0.8204		4.99	5.00	-0.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVL 320-16094/13 Calibration Date: 05/09/2013 19:00

Instrument ID: A5 Calib Start Date: 05/09/2013 16:13

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/09/2013 18:10

Lab File ID: 09MAY13-Perc-015.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8227	0.8696		0.529	0.500	5.7	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCV 320-16094/24 Calibration Date: 05/09/2013 22:04

Instrument ID: A5 Calib Start Date: 05/09/2013 16:13

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/09/2013 18:10

Lab File ID: 09MAY13-Perc-026.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8227	0.8105		0.985	1.00	-1.5	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Lab Sample ID: CCVL 320-16094/42 Calibration Date: 05/10/2013 03:05

Instrument ID: A5 Calib Start Date: 05/09/2013 16:13

GC Column: Anion HR ID: 4.60(mm) Calib End Date: 05/09/2013 18:10

Lab File ID: 09MAY13-Perc-044.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Ave	0.8227	0.7671		0.466	0.500	-6.8	50.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-16094/11

Matrix: Water Lab File ID: 09MAY13-Perc-013.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/09/2013 18:27

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 16094 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 320-16094/43

Matrix: Water Lab File ID: 09MAY13-Perc-045.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/10/2013 03:22

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 16094 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 320-16094/2

Matrix: Water Lab File ID: 09MAY13-Perc-004.d

Analysis Method: 6850 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 05/09/2013 15:57

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 16094 Units: ng/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.078

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Lab File ID: 09MAY13-Perc-016.d Lab Sample ID: MB 320-15942/1-A

Matrix: Water Date Extracted: 05/08/2013 10:53

Instrument ID: A5 Date Analyzed: 05/09/2013 19:17

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 320-15942/2-A	09MAY13-Perc-017.d	05/09/2013 19:34
MRC-MW41A-042913	240-23812-2	09MAY13-Perc-019.d	05/09/2013 20:07
MRC-MW41A-042913 MS	240-23812-2 MS	09MAY13-Perc-020.d	05/09/2013 20:24
MRC-MW41A-042913 MSD	240-23812-2 MSD	09MAY13-Perc-021.d	05/09/2013 20:41

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-15942/1-A

Matrix: Water Lab File ID: 09MAY13-Perc-016.d

Analysis Method: 6850 Date Collected:

Extraction Method: Filtration Date Extracted: 05/08/2013 10:53

Sample wt/vol: 4.00(mL) Date Analyzed: 05/09/2013 19:17

Con. Extract Vol.: 4.00(mL) Dilution Factor: 1

Injection Volume: 100(uL) GC Column: Anion HR ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 16094 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-73-0	Perchlorate	0.50	U	0.50	0.082

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09MAY13-Perc-017.d

Lab ID: LCS 320-15942/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	5.00	4.82	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09MAY13-Perc-020.d

Lab ID: 240-23812-2 MS Client ID: MRC-MW41A-042913 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Perchlorate	5.00	0.50 U	4.80	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09MAY13-Perc-021.d

Lab ID: 240-23812-2 MSD Client ID: MRC-MW41A-042913 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perchlorate	5.00	4.85	97	1	15	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09MAY13-Perc-018.d

Lab ID: INF 320-15942/3-A Client ID:

COMPOUND	SPIKE ADDED (ng/mL)	INF CONCENTRATION (ng/mL)	INF % REC	QC LIMITS REC	#
Perchlorate	5.00	4.81	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 6850

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Instrument ID: A5 Calibration Start Date: 05/09/2013 16:13

GC Column: Anion HR ID: 4.6(mm) Calibration End Date: 05/09/2013 18:10

Calibration ID: 2812

		18OP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		106557215	9.92				
UPPER LIMIT		159835823	10.92				
LOWER LIMIT		53278608	8.92				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-16094/11		105615387	9.93				
ICV 320-16094/12		113844591	9.93				
CCVL 320-16094/13		122683201	9.93				
MB 320-15942/1-A		95900534	9.93				
LCS 320-15942/2-A		134665534	9.93				
INF 320-15942/3-A		120705176	9.86				
240-23812-2	MRC-MW41A-042913	115947644	9.90				
240-23812-2 MS	MRC-MW41A-042913 MS	106659890	9.90				
240-23812-2 MSD	MRC-MW41A-042913 MSD	110258943	9.90				
CCV 320-16094/24		89821752	9.91				
CCVL 320-16094/42		128823782	9.90				
CCB 320-16094/43		99470889	9.91				

18OP = 18-O Perchlorate

Area Limit = 50%-150% of internal standard area
RT Limit = ± 1 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6850

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 240-23812-1

SDG No.:

Batch Number: 15942 Batch Start Date: 05/08/13 10:53 Batch Analyst: Phan, Tuan

Batch Method: Filtration Batch End Date: 05/08/13 12:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	LC6850IS 00021	LC6850SP 00010		
MB 320-15942/1		Filtration, 6850		4.00 mL	4.00 mL	40 uL			
LCS 320-15942/2		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
INF 320-15942/3		Filtration, 6850		4.00 mL	4.00 mL	40 uL	20 uL		
240-23812-D-2	MRC-MW41A-042913	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL			
240-23812-D-2 MS	MRC-MW41A-042913	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		
240-23812-D-2 MSD	MRC-MW41A-042913	Filtration, 6850	T	4.00 mL	4.00 mL	40 uL	20 uL		

Batch Notes	
BA/AG/H Cartridge Lot#	130206
Filter #2 Lot #	0.20 MILLEX R2AA50532
Filter Lot #	0.45 uM MILLIPORE R2AA68913
IS Reagent Drop	TP 5/8/13
IS Reagent Drop Witness	AH 5/8/13
SMCS Lot #	4515-019D
Reagent Water Lot #	4/26/13

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG No.:

Project: MRC 2013 GW SAMPLING, MD

Client Sample ID	Lab Sample ID
MRC-MW-48A-042913	240-23812-5

Comments:

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23812-1

SDG No.:

Project: MRC 2013 GW SAMPLING, MD

Client Sample ID	Lab Sample ID
MRC-MW41A-042913	240-23812-2
MRC-MW98A-042913	240-23812-3
MRC-MW98B-042913	240-23812-4
MRC-MW-48A-042913	240-23812-5
MRC-MW-111B-042913	240-23812-7

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

ICV Source: MT6500ICV_00010 Concentration Units: ug/L

CCV Source: MT6500CCV_00027

Analyte	ICV 240-84570/4 05/02/2013 08:04				CCV 240-84570/30 05/02/2013 09:55				CCV 240-84570/42 05/02/2013 10:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25300		25000	101	53900		50000	108	54900		50000	110
Iron	12500		12500	100	26500		25000	106	26800		25000	107
Magnesium	25000		25000	100	53600		50000	107	54400		50000	109
Manganese	1510		1500	101	2000		2000	100	1990		2000	100
Potassium	24900		25000	99	52400		50000	105	52700		50000	105
Sodium	25200		25000	101	52800		50000	106	53200		50000	106
~~*SiO2, Silica*~~	~~6790~~		~~6420~~	~~106~~	12300		10700	115	12500		10700	117

Not used

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

ICV Source: MT6500ICV_00010 Concentration Units: ug/L

CCV Source: MT6500CCV_00028

Analyte	ICV 240-84919/4 05/06/2013 08:37				CCV 240-84919/18 05/06/2013 09:32				CCV 240-84919/30 05/06/2013 10:46			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
SiO2, Silica	6670		6420	104	11300		10700	106	11300		10700	105
Calcium	25100		25000	100	49900		50000	100	49200		50000	98
Iron	12300		12500	98	24600		25000	98	24000		25000	96
Magnesium	24500		25000	98	49300		50000	99	48800		50000	98
Manganese	1500		1500	100	1960		2000	98	1920		2000	96
Potassium	24100		25000	96	47900		50000	96	46400		50000	93
Sodium	24400		25000	98	48500		50000	97	47000		50000	94

Not used

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00369

Analyte	ICV 240-84755/7-A 05/06/2013 11:23				CCVL 240-84755/10-A 05/06/2013 11:28				CCV 240-84755/12-A 05/06/2013 11:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.46		2.50	98	4.97		5.00	99	5.28		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

ICV Source: MTHgStd_00009 Concentration Units: ug/L

CCV Source: MTHGCALW_00369

Analyte	CCV 240-84755/12-A 05/06/2013 12:20											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.24		5.00	105								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	ICV 440-103278/6 05/08/2013 11:47				CCV 440-103278/17 05/08/2013 20:25				CCV 440-103278/29 05/08/2013 20:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.5		25.0	90	48.2		50.0	96	48.3		50.0	97
Arsenic	25.3		25.0	101	50.7		50.0	101	51.1		50.0	102
Barium	25.9		25.0	104	49.6		50.0	99	49.8		50.0	100
Beryllium	25.1		25.0	100	51.9		50.0	104	50.1		50.0	100
Cadmium	25.4		25.0	101	48.5		50.0	97	48.5		50.0	97
Chromium	25.9		25.0	104	51.3		50.0	103	50.8		50.0	102
Cobalt	24.6		25.0	99	49.6		50.0	99	49.5		50.0	99
Copper	25.4		25.0	102	48.3		50.0	97	47.1		50.0	94
Lead	25.1		25.0	100	49.0		50.0	98	48.9		50.0	98
Molybdenum	26.3		25.0	105	48.2		50.0	96	48.6		50.0	97
Nickel	25.4		25.0	102	47.7		50.0	95	47.5		50.0	95
Selenium	25.3		25.0	101	51.8		50.0	104	51.4		50.0	103
Silver	24.7		25.0	99	47.5		50.0	95	48.1		50.0	96
Thallium	25.6		25.0	102	52.6		50.0	105	52.2		50.0	104
Vanadium	25.5		25.0	102	52.2		50.0	104	51.6		50.0	103
Zinc	26.1		25.0	104	53.2		50.0	106	53.4		50.0	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	CCV 440-103278/39 05/08/2013 21:15											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	47.6		50.0	95								
Arsenic	50.5		50.0	101								
Barium	49.2		50.0	98								
Beryllium	51.5		50.0	103								
Cadmium	48.2		50.0	96								
Chromium	50.1		50.0	100								
Cobalt	49.8		50.0	100								
Copper	47.8		50.0	96								
Lead	48.5		50.0	97								
Molybdenum	47.3		50.0	95								
Nickel	47.2		50.0	94								
Selenium	52.1		50.0	104								
Silver	47.0		50.0	94								
Thallium	52.6		50.0	105								
Vanadium	51.2		50.0	102								
Zinc	53.1		50.0	106								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

ICV Source: ME 1PPM HG2_00079 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00081

Analyte	ICV 440-105018/1-A 05/16/2013 18:39				CCV 440-105018/3-A 05/16/2013 19:08				CCV 440-105018/3-A 05/16/2013 19:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.23		8.00	103	4.31		4.00	108	4.42		4.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-84570/25 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00011

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5170		103	70-130
Iron	200	217		108	70-130
Potassium	5000	5090		102	70-130
Magnesium	5000	5330		107	70-130
Manganese	15.0	15.5		103	70-130
Sodium	5000	5280		106	70-130

Lab Sample ID: CRI 240-84570/95 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00011

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	5350		107	70-130
Iron	200	219		109	70-130
Potassium	5000	4970	J	99	70-130
Magnesium	5000	5570		111	70-130
Manganese	15.0	15.4		103	70-130
Sodium	5000	5290		106	70-130

Lab Sample ID: CRI 240-84919/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1050	J	98	70-130

Lab Sample ID: CRI 240-84919/32 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00007

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1080	J	101	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-84755/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00369

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.143	J	71	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103278/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.07	J	107	50-150
Arsenic	1.00	1.03		103	50-150
Beryllium	0.500	0.515		103	50-150
Cadmium	0.500	0.534	J	107	50-150
Barium	1.00	1.05		105	50-150
Chromium	1.00	1.19	J	119	50-150
Copper	1.00	1.10	J	110	50-150
Nickel	1.00	1.22	J	122	50-150
Lead	1.00	1.05		105	50-150
Selenium	1.00	0.795	J	80	50-150
Cobalt	0.500	0.524	J	105	50-150
Silver	1.00	1.06		106	50-150
Thallium	1.00	1.06		106	50-150
Zinc	5.00	5.44	J	109	50-150
Molybdenum	1.00	1.09	J	109	50-150
Vanadium	2.00	2.10		105	50-150

Lab Sample ID: CRI 440-103278/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.01		100	50-150
Arsenic	2.00	1.99		99	50-150
Beryllium	1.00	1.01		101	50-150
Cadmium	1.00	1.02		102	50-150
Barium	2.00	2.23		111	50-150
Chromium	2.00	2.36		118	50-150
Copper	2.00	2.16		108	50-150
Nickel	2.00	2.50		125	50-150
Lead	2.00	2.04		102	50-150
Selenium	2.00	2.11		106	50-150
Cobalt	1.00	1.04		104	50-150
Silver	2.00	2.08		104	50-150
Thallium	2.00	2.10		105	50-150
Zinc	10.0	11.3	J	113	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103278/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.08		104	50-150
Vanadium	4.00	4.17		104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-105018/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00081

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.240		120	50-150

Lab Sample ID: CRA 440-105018/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00081

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.235		117	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-84570/5 05/02/2013 08:08		CCB 240-84570/31 05/02/2013 09:59		CCB 240-84570/43 05/02/2013 10:45			
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U		
Iron	200	200	U	200	U	200	U		
Magnesium	5000	5000	U	5000	U	5000	U		
Manganese	15	15	U	15	U	15	U		
Potassium	5000	5000	U	5000	U	5000	U		
Sodium	5000	5000	U	5000	U	5000	U		
SiO2, Silica	1100	1100	U	1100	U	1100	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-84919/5 05/06/2013 08:40		CCB 240-84919/19 05/06/2013 09:36		CCB 240-84919/31 05/06/2013 10:50			
		Found	C	Found	C	Found	C	Found	C
SiO2, Silica	1100	1100	U	1100	U	1100	U		
Calcium	5000	5000	U	203	J	194	J		
Iron	200	200	U	200	U	200	U		
Magnesium	5000	5000	U	5000	U	5000	U		
Manganese	15	15	U	15	U	0.448	J		
Potassium	5000	5000	U	5000	U	5000	U		
Sodium	5000	5000	U	5000	U	5000	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-84755/8-A 05/06/2013 11:25		CCB 240-84755/11-A 05/06/2013 11:30		CCB 240-84755/11-A 05/06/2013 11:54		CCB 240-84755/11-A 05/06/2013 12:22	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.126	J	0.20	U	0.20	U

Not used

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-103278/7 05/08/2013 11:49		CCB 440-103278/18 05/08/2013 20:28		CCB 440-103278/30 05/08/2013 20:55		CCB 440-103278/40 05/08/2013 21:18	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.310	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	0.168	J	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.131	J	0.129	J	0.103	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Not used

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-105018/2-A 05/16/2013 18:41		CCB 440-105018/4-A 05/16/2013 19:10		CCB 440-105018/4-A 05/16/2013 19:35			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-84271/1-A

Instrument Code: I9 Batch No.: 84570

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	216	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	5000	U		6010C
7439-95-4	Magnesium	72.4	J		6010C
7439-96-5	Manganese	1.20	J		6010C
7440-23-5	Sodium	5000	U		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-84271/1-A

Instrument Code: I9 Batch No.: 84919

CAS No.	Analyte	Concentration	C	Q	Method
14808-60-7	SiO2, Silica	1100	U		6010C

FORM III-IN

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-84587/1-A

Instrument Code: H4 Batch No.: 84846

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-103058/1-A

Instrument Code: ICPMS5 Batch No.: 103278

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-105035/1-A

Instrument Code: CV-HG2 Batch No.: 105230

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICSA 240-84570/8 Instrument ID: I9

Lab File ID: I9050213A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**500000**	**493870**	**99**
Iron	**200000**	**194930**	**97**
Magnesium	**500000**	**513820**	**103**
Manganese		**2.72**	
Potassium		**89.8**	
Sodium		**67.5**	
Aluminum	*500000*	*526300*	*105*
Antimony		*-5.37*	
Arsenic		*-2.85*	
Barium		*0.183*	
Beryllium		*-0.337*	
Boron		*0.318*	
Cadmium		*0.349*	
Chromium		*2.84*	
Cobalt		*-1.88*	
Copper		*-2.51*	
Lead		*-2.46*	
Lithium		*-24.9*	
Molybdenum		*-2.35*	
Nickel		*1.43*	
Selenium		*2.41*	
Silicon		*-22.6*	
Silver		*-0.289*	
Strontium		*4.92*	
Thallium		*-0.181*	
Tin		*4.54*	
Titanium		*-0.363*	
Vanadium		*-4.12*	
Zinc		*1.36*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

SDG 23812

Aqueous

Affected Analyte	Sample	Reported Result	Qualifier	Interferent	Interferent level in ICS	Conc. ICS	Interferent Level	Est. Interference	Validation Action
Sb	MRC-MW-48A-042913	2	U	Na	10000	0.318	28000	0.89	na
Cd		1	U		10000	1.16	28000	3.25	na
Cr		2	U		10000	1.46	28000	4.09	na
Co		100			10000	0.104	28000	0.29	na
Ni		63			10000	1.06	28000	2.97	na

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICSAB 240-84570/9 Instrument ID: I9

Lab File ID: I9050213A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**494200**	**99**
Iron	**200000**	**197380**	**99**
Magnesium	**500000**	**517480**	**103**
Manganese	**500**	**504**	**101**
Potassium	**10000**	**10730**	**107**
Sodium	**10000**	**10947**	**109**
Aluminum	*500000*	*532710*	*107*
Antimony	*1000*	*1041*	*104*
Arsenic	*1000*	*1048*	*105*
Barium	*500*	*489*	*98*
Beryllium	*500*	*502*	*100*
Boron	*500*	*526*	*105*
Cadmium	*1000*	*1052*	*105*
Chromium	*500*	*491*	*98*
Cobalt	*500*	*515*	*103*
Copper	*500*	*530*	*106*
Lead	*1000*	*930*	*93*
Lithium	*500*	*508*	*102*
Molybdenum	*1000*	*1004*	*100*
Nickel	*1000*	*1025*	*103*
Selenium	*1000*	*1033*	*103*
Silicon	*10000*	*10325*	*103*
Silver	*1000*	*1117*	*112*
Strontium	*1500*	*1487*	*99*
Thallium	*1000*	*1004*	*100*
Tin	*500*	*534*	*107*
Titanium	*500*	*527*	*105*
Vanadium	*500*	*492*	*98*
Zinc	*1000*	*1048*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICSA 240-84919/8 Instrument ID: I9

Lab File ID: I9050613A.asc ICS Source: MTTRICSAW_00017

Concentration Units: ug/L

Analyte	True	Found	
	Solution A	Solution A	Percent Recovery
Aluminum	*500000*	*504360*	*101*
Antimony		*-7.11*	
Arsenic		*-3.63*	
Barium		*0.241*	
Beryllium		*-0.423*	
Boron		*-0.0011*	
Cadmium		*0.286*	
Calcium	*500000*	*476520*	*95*
Chromium		*2.58*	
Cobalt		*-1.66*	
Copper		*-2.31*	
Iron	*200000*	*187620*	*94*
Lead		*3.62*	
Lithium		*-24.3*	
Magnesium	*500000*	*499810*	*100*
Manganese		*2.86*	
Molybdenum		*-2.20*	
Nickel		*2.00*	
Potassium		*13.4*	
Selenium		*3.09*	
Silicon		*-28.6*	
Silver		*-0.517*	
Sodium		*77.2*	
Strontium		*8.08*	
Thallium		*-2.81*	
Tin		*6.26*	
Titanium		*-0.759*	
Vanadium		*-1.86*	
Zinc		*11.2*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICSAB 240-84919/9 Instrument ID: I9

Lab File ID: I9050613A.asc ICS Source: MT6500ICSAB2W_00005

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	*500000*	*508030*	*102*
Antimony	*1000*	*982*	*98*
Arsenic	*1000*	*1010*	*101*
Barium	*500*	*483*	*97*
Beryllium	*500*	*491*	*98*
Boron	*500*	*501*	*100*
Cadmium	*1000*	*1014*	*101*
Calcium	*500000*	*480630*	*96*
Chromium	*500*	*481*	*96*
Cobalt	*500*	*500*	*100*
Copper	*500*	*518*	*104*
Iron	*200000*	*188400*	*94*
Lead	*1000*	*889*	*89*
Lithium	*500*	*505*	*101*
Magnesium	*500000*	*500610*	*100*
Manganese	*500*	*491*	*98*
Molybdenum	*1000*	*958*	*96*
Nickel	*1000*	*997*	*100*
Potassium	*10000*	*10281*	*103*
Selenium	*1000*	*995*	*99*
Silicon	*10000*	*9840*	*98*
Silver	*1000*	*1090*	*109*
Sodium	*10000*	*10426*	*104*
Strontium	*1500*	*1454*	*97*
Thallium	*1000*	*954*	*95*
Tin	*500*	*520*	*104*
Titanium	*500*	*511*	*102*
Vanadium	*500*	*484*	*97*
Zinc	*1000*	*1037*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICSA 440-103278/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00211

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.318**	
Arsenic		**0.0390**	
Barium		**0.202**	
Beryllium		**0.0160**	
Cadmium		**1.16**	
Chromium		**1.46**	
Cobalt		**0.104**	
Copper		**0.996**	
Lead		**0.122**	
Molybdenum	**2000**	**2134**	**107**
Nickel		**1.06**	
Selenium		**-0.112**	
Silver		**0.0510**	
Thallium		**0.0180**	
Vanadium		**0.165**	
Zinc		**3.42**	
Aluminum	*100000*	*89383*	*89*
Calcium	*100000*	*94626*	*95*
Cerium		*0.0490*	
Iron	*100000*	*91715*	*92*
Magnesium	*100000*	*93342*	*93*
Manganese		*0.145*	
Potassium	*100000*	*95202*	*95*
Sodium	*100000*	*94937*	*95*
Sr		*4.98*	
Tin		*0.137*	
Uranium		*0.0200*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Lab Sample ID: ICSAB 440-103278/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00210

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.9**	**105**
Arsenic	**20.0**	**19.8**	**99**
Barium	**20.0**	**21.5**	**108**
Beryllium	**20.0**	**21.1**	**106**
Cadmium	**20.0**	**20.8**	**104**
Chromium	**20.0**	**20.5**	**102**
Cobalt	**20.0**	**18.7**	**93**
Copper	**20.0**	**19.1**	**96**
Lead	**20.0**	**19.3**	**97**
Molybdenum	**2020**	**2170**	**107**
Nickel	**20.0**	**19.2**	**96**
Selenium	**20.0**	**18.7**	**93**
Silver	**20.0**	**19.5**	**97**
Thallium	**20.0**	**19.2**	**96**
Vanadium	**20.0**	**19.9**	**100**
Zinc	**20.0**	**20.9**	**104**
Aluminum	*100000*	*89511*	*89*
Calcium	*101000*	*95957*	*95*
Cerium	*20.0*	*21.6*	*108*
Iron	*100000*	*92420*	*92*
Magnesium	*101000*	*94309*	*94*
Manganese	*20.0*	*19.4*	*97*
Potassium	*101000*	*96621*	*96*
Sodium	*101000*	*95604*	*95*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*20.8*	*104*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-48A-042913 MS
Lab ID: 240-23812-5 MS
Lab Name: TestAmerica Canton
Job No.: 240-23812-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	55700		1600	J	50000	108	75-125		6010C
Iron	31000		31000		1000	35	75-125	4	6010C
Potassium	53000		420	J	50000	105	75-125		6010C
Magnesium	64400		11000		50000	107	75-125		6010C
Manganese	9900		9700		500	44	75-125	4	6010C
Sodium	80600		28000		50000	104	75-125		6010C
SiO2, Silica	13900		12000		2140	70	75-125	4	6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW-48A-042913 MSD Lab ID: 240-23812-5 MSD

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	56400		50000	110	75-125	1	20		6010C
Iron	31700		1000	106	75-125	2	20	4	6010C
Potassium	53500		50000	106	75-125	1	20		6010C
Magnesium	65300		50000	109	75-125	1	20		6010C
Manganese	10100		500	86	75-125	2	20	4	6010C
Sodium	81700		50000	106	75-125	1	20		6010C
SiO2, Silica	14200		2140	82	75-125	2	20	4	6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23744-M-1-E MS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.02		0.20	U	1.00	102	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23744-M-1-F MSD

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.03		1.00	103	69-134	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-45233-B-1-B MS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	76.4		2.0	U	80.0	96	75-125		6020
Arsenic	81.5		5.0	U	80.0	102	75-125		6020
Beryllium	79.4		1.0	U	80.0	99	75-125		6020
Cadmium	70.9		1.0	U	80.0	89	75-125		6020
Barium	92.3		12		80.0	100	75-125		6020
Chromium	74.5		2.0	U	80.0	93	75-125		6020
Copper	69.2		1.6	J	80.0	84	75-125		6020
Nickel	75.8		6.9		80.0	86	75-125		6020
Lead	71.1		1.0	U	80.0	89	75-125		6020
Selenium	78.6		5.0	U	80.0	98	75-125		6020
Cobalt	76.6		3.3		80.0	92	75-125		6020
Silver	74.0		0.13	J	80.0	92	75-125		6020
Thallium	75.9		2.0	U	80.0	95	75-125		6020
Zinc	63.6		20	U	80.0	80	75-125		6020
Molybdenum	79.3		0.29	J	80.0	99	75-125		6020
Vanadium	77.7		20	U	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-45233-B-1-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	75.9		80.0	95	75-125	1	20		6020
Arsenic	81.4		80.0	102	75-125	0	20		6020
Beryllium	79.1		80.0	99	75-125	0	20		6020
Cadmium	70.6		80.0	88	75-125	0	20		6020
Barium	91.4		80.0	99	75-125	1	20		6020
Chromium	75.8		80.0	95	75-125	2	20		6020
Copper	71.1		80.0	87	75-125	3	20		6020
Nickel	75.8		80.0	86	75-125	0	20		6020
Lead	71.4		80.0	89	75-125	0	20		6020
Selenium	78.4		80.0	98	75-125	0	20		6020
Cobalt	76.9		80.0	92	75-125	0	20		6020
Silver	73.8		80.0	92	75-125	0	20		6020
Thallium	77.4		80.0	97	75-125	2	20		6020
Zinc	64.2		80.0	80	75-125	1	20		6020
Molybdenum	79.6		80.0	99	75-125	0	20		6020
Vanadium	79.7		80.0	100	75-125	3	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-46166-G-3-B MS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.12		0.20	U	8.00	101	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-46166-G-3-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.17		8.00	102	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-45233-B-1-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	74.2		2.0	U	80.0	93	75-125		6020
Arsenic	80.3		5.0	U	80.0	100	75-125		6020
Beryllium	78.3		1.0	U	80.0	98	75-125		6020
Cadmium	69.8		1.0	U	80.0	87	75-125		6020
Barium	90.9		12		80.0	98	75-125		6020
Chromium	74.5		2.0	U	80.0	93	75-125		6020
Copper	69.3		1.6	J	80.0	85	75-125		6020
Nickel	75.7		6.9		80.0	86	75-125		6020
Lead	71.0		1.0	U	80.0	89	75-125		6020
Selenium	78.9		5.0	U	80.0	99	75-125		6020
Cobalt	76.8		3.3		80.0	92	75-125		6020
Silver	68.5		0.13	J	80.0	85	75-125		6020
Thallium	76.7		2.0	U	80.0	96	75-125		6020
Zinc	67.8		20	U	80.0	85	75-125		6020
Molybdenum	78.3		0.29	J	80.0	97	75-125		6020
Vanadium	78.7		20	U	80.0	98	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-84271/2-A

Lab Name: TestAmerica Canton Job No.: 240-23812-1

Sample Matrix: Water LCS Source: MTICP2A_00026

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	52100		104	80	120		6010C
Iron	1000	1030		103	80	120		6010C
Potassium	50000	50300		101	80	120		6010C
Magnesium	50000	51500		103	80	120		6010C
Manganese	500	483		97	80	120		6010C
Sodium	50000	51000		102	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-84271/2-A

Lab Name: TestAmerica Canton Job No.: 240-23812-1

Sample Matrix: Water LCS Source: MTICP1_00022

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
SiO2, Silica	2140	2140		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-84587/2-A

Lab Name: TestAmerica Canton Job No.: 240-23812-1

Sample Matrix: Water LCS Source: MTHGCALW_00368

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.71		94	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-103058/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00017

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	77.1		96	80	120		6020
Arsenic	80.0	79.1		99	80	120		6020
Beryllium	80.0	78.7		98	80	120		6020
Cadmium	80.0	77.3		97	80	120		6020
Barium	80.0	79.2		99	80	120		6020
Chromium	80.0	80.6		101	80	120		6020
Copper	80.0	78.2		98	80	120		6020
Nickel	80.0	76.4		96	80	120		6020
Lead	80.0	77.2		97	80	120		6020
Selenium	80.0	80.7		101	80	120		6020
Cobalt	80.0	79.0		99	80	120		6020
Silver	80.0	79.6		99	80	120		6020
Thallium	80.0	82.5		103	80	120		6020
Zinc	80.0	72.1		90	80	120		6020
Molybdenum	80.0	76.7		96	80	120		6020
Vanadium	80.0	80.9		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-105035/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00081

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.00		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23812-5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-23812-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	1600	J	1430	J	NC		6010C
Iron	31000		32100		4.7		6010C
Potassium	420	J	25000	U	NC		6010C
Magnesium	11000		11100	J	4.8		6010C
Manganese	9700		10200		5.1		6010C
Sodium	28000		29600		NC		6010C
SiO2, Silica	12000		12100	J	3.0		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23844-D-6-A SD ^5

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23812-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	1.1	J	10	U	NC		6020
Arsenic	1.0	J	25	U	NC		6020
Beryllium	0.13	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	83		81.9		1.4		6020
Chromium	6.2		6.07	J	NC		6020
Copper	9.5		9.94	J	NC		6020
Nickel	8.4		8.37	J	NC		6020
Lead	8.0		8.17		NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	2.0		2.06	J	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	640		613		3.9		6020
Molybdenum	0.97	J	50	U	NC		6020
Vanadium	8.9	J	9.51	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-23812-1

SDG No.:

Instrument ID: I9 Date: 04/04/2013 11:44

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C
SiO2, Silica		428000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-23812-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23812-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-84271/1-A	05/01/2013 09:51	84271		50	50
LCS 240-84271/2-A	05/01/2013 09:51	84271		50	50
240-23812-5	05/01/2013 09:51	84271		50	50
240-23812-5 MS	05/01/2013 09:51	84271		50	50
240-23812-5 MSD	05/01/2013 09:51	84271		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-84587/1-A	05/03/2013 13:05	84587		100	100
LCS 240-84587/2-A	05/03/2013 13:05	84587		100	100
240-23744-M-1-E MS	05/03/2013 13:05	84587		100	100
240-23744-M-1-F MSD	05/03/2013 13:05	84587		100	100
240-23812-5	05/03/2013 13:05	84587		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-103058/1-A	05/08/2013 12:51	103058		50	50
LCS 440-103058/2-A	05/08/2013 12:51	103058		50	50
440-45233-B-1-B MS	05/08/2013 12:51	103058		50	50
440-45233-B-1-C MSD	05/08/2013 12:51	103058		50	50
240-23812-2	05/08/2013 12:51	103058		50	50
240-23812-3	05/08/2013 12:51	103058		50	50
240-23812-4	05/08/2013 12:51	103058		50	50
240-23812-5	05/08/2013 12:51	103058		50	50
240-23812-7	05/08/2013 12:51	103058		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-105035/1-A	05/16/2013 12:51	105035		20	20
LCS 440-105035/2-A	05/16/2013 12:51	105035		20	20
440-46166-G-3-B MS	05/16/2013 12:51	105035		20	20
440-46166-G-3-C MSD	05/16/2013 12:51	105035		20	20
240-23812-2	05/16/2013 12:51	105035		20	20
240-23812-3	05/16/2013 12:51	105035		20	20
240-23812-4	05/16/2013 12:51	105035		20	20
240-23812-7	05/16/2013 12:51	105035		20	20

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na																								
ZZZZZZ			13:31																													
ZZZZZZ			13:35																													
ZZZZZZ			13:39																													
ZZZZZZ			13:43																													
ZZZZZZ			13:47																													
CCV 240-84570/90			13:51																													
CCB 240-84570/91			13:55																													
ZZZZZZ			13:58																													
ZZZZZZ			14:03																													
ZZZZZZ			14:07																													
CRI 240-84570/95	1		14:11	X	X	X	X	X	X																							
ZZZZZZ			14:14																													
ZZZZZZ			14:19																													
ZZZZZZ			14:23																													
ZZZZZZ			14:27																													
ZZZZZZ			14:31																													
ZZZZZZ			14:35																													
CCV 240-84570/102			14:40																													
CCB 240-84570/103			14:44																													
ZZZZZZ			14:47																													
ZZZZZZ			14:52																													
ZZZZZZ			14:56																													
ZZZZZZ			15:00																													
ZZZZZZ			15:04																													
ZZZZZZ			15:08																													
ZZZZZZ			15:12																													
ZZZZZZ			15:15																													
ZZZZZZ			15:20																													
ZZZZZZ			15:24																													
ZZZZZZ			15:28																													
ZZZZZZ			15:32																													
CCV 240-84570/116			15:42																													
CCB 240-84570/117			15:46																													
ZZZZZZ			15:49																													
ZZZZZZ			15:53																													
ZZZZZZ			15:57																													
ZZZZZZ			16:01																													
ZZZZZZ			16:05																													
ZZZZZZ			16:09																													
ZZZZZZ			16:13																													
ZZZZZZ			16:17																													
CCV 240-84570/126			16:21																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ca	Fe	K	Mg	Mn	Na																								
CCB 240-84570/127			16:25																													
ZZZZZZ			16:29																													
ZZZZZZ			16:33																													
ZZZZZZ			16:36																													
ZZZZZZ			16:40																													
ZZZZZZ			16:44																													
ZZZZZZ			16:48																													
ZZZZZZ			16:53																													
ZZZZZZ			16:57																													
ZZZZZZ			17:01																													
ZZZZZZ			17:05																													
CCV 240-84570/138			17:09																													
CCB 240-84570/139			17:13																													
ZZZZZZ			17:17																													
ZZZZZZ			17:21																													
ZZZZZZ			17:24																													
ZZZZZZ			17:28																													
ZZZZZZ			17:32																													
ZZZZZZ			17:36																													
ZZZZZZ			17:40																													
ZZZZZZ			17:44																													
ZZZZZZ			17:48																													
ZZZZZZ			17:52																													
CCV 240-84570/150			17:55																													
CCB 240-84570/151			17:59																													
ZZZZZZ			18:03																													
ZZZZZZ			18:07																													
ZZZZZZ			18:12																													
ZZZZZZ			18:16																													
ZZZZZZ			18:20																													
ZZZZZZ			18:24																													
ZZZZZZ			18:28																													
ZZZZZZ			18:32																													
ZZZZZZ			18:36																													
ZZZZZZ			18:40																													
CCV 240-84570/162			18:44																													
CCB 240-84570/163			18:48																													
ZZZZZZ			18:52																													
ZZZZZZ			18:56																													
ZZZZZZ			19:00																													
ZZZZZZ			19:04																													
ZZZZZZ			19:08																													

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/02/2013 07:52 End Date: 05/03/2013 00:57

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ca	Fe	K	Mg	Mn	Na																					
ZZZZZZ			00:46																											
ZZZZZZ			00:50																											
CCV 240-84570/255			00:53																											
CCB 240-84570/256			00:57																											

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/06/2013 08:24 End Date: 05/06/2013 21:40

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
ICIS 240-84919/1	1		08:24	X
CALSTD 240-84919/2 IC			08:29	X
CALSTD 240-84919/3 IC			08:33	X
ICV 240-84919/4	1		08:37	X
ICB 240-84919/5	1		08:40	X
CRI 240-84919/6	1		08:45	X
ZZZZZZ			08:48	
ICSA 240-84919/8	1		08:52	
ICSAB 240-84919/9	1		08:56	
CCV 240-84919/10			09:00	
CCB 240-84919/11			09:04	
ZZZZZZ			09:08	
ZZZZZZ			09:12	
ZZZZZZ			09:16	
ZZZZZZ			09:20	
ZZZZZZ			09:24	
ZZZZZZ			09:28	
CCV 240-84919/18	1		09:32	X
CCB 240-84919/19	1		09:36	X
MB 240-84271/1-A	1	R	09:49	X
LCS 240-84271/2-A	1	R	10:10	X
240-23812-5	5	R	10:14	X
240-23812-5 SD	25	R	10:18	X
240-23812-5 MS	5	R	10:22	X
240-23812-5 MSD	5	R	10:25	X
ZZZZZZ			10:29	
ZZZZZZ			10:34	
ZZZZZZ			10:37	
ZZZZZZ			10:41	
CCV 240-84919/30	1		10:46	X
CCB 240-84919/31	1		10:50	X
CRI 240-84919/32	1		10:54	X
ZZZZZZ			10:58	
ZZZZZZ			11:02	
ZZZZZZ			11:05	
ZZZZZZ			11:10	
ZZZZZZ			11:14	
ZZZZZZ			11:17	
ZZZZZZ			11:22	
CCV 240-84919/40			11:26	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/06/2013 08:24 End Date: 05/06/2013 21:40

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
CCB 240-84919/41			11:30	
ZZZZZZ			11:34	
ZZZZZZ			11:38	
ZZZZZZ			11:42	
ZZZZZZ			11:46	
ZZZZZZ			11:50	
ZZZZZZ			11:54	
ZZZZZZ			11:58	
ZZZZZZ			12:02	
ZZZZZZ			12:07	
ZZZZZZ			12:11	
CCV 240-84919/52			12:15	
CCB 240-84919/53			12:19	
ZZZZZZ			12:23	
ZZZZZZ			12:27	
ZZZZZZ			12:31	
ZZZZZZ			12:35	
ZZZZZZ			12:39	
ZZZZZZ			12:43	
ZZZZZZ			12:47	
ZZZZZZ			12:51	
ZZZZZZ			12:55	
ZZZZZZ			12:59	
CCV 240-84919/64			13:03	
CCB 240-84919/65			13:07	
ZZZZZZ			13:11	
ZZZZZZ			13:14	
ZZZZZZ			13:18	
ZZZZZZ			13:22	
ZZZZZZ			13:26	
ZZZZZZ			13:30	
ZZZZZZ			13:34	
ZZZZZZ			13:37	
ZZZZZZ			13:41	
ZZZZZZ			13:45	
CCV 240-84919/76			13:49	
CCB 240-84919/77			13:53	
ZZZZZZ			13:57	
ZZZZZZ			14:01	
ZZZZZZ			14:05	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/06/2013 08:24 End Date: 05/06/2013 21:40

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
ZZZZZZ			14:09	
ZZZZZZ			14:13	
ZZZZZZ			14:16	
ZZZZZZ			14:20	
ZZZZZZ			14:24	
ZZZZZZ			14:28	
ZZZZZZ			14:32	
CCV 240-84919/88			14:36	
CCB 240-84919/89			14:40	
ZZZZZZ			14:44	
ZZZZZZ			14:48	
ZZZZZZ			14:52	
ZZZZZZ			14:56	
ZZZZZZ			15:00	
ZZZZZZ			15:04	
ZZZZZZ			15:08	
ZZZZZZ			15:12	
ZZZZZZ			15:16	
ZZZZZZ			15:20	
CCV 240-84919/100			15:24	
CCB 240-84919/101			15:27	
ZZZZZZ			15:31	
ZZZZZZ			15:35	
ZZZZZZ			15:39	
ZZZZZZ			15:43	
ZZZZZZ			15:47	
ZZZZZZ			15:51	
ZZZZZZ			15:55	
ZZZZZZ			15:59	
ZZZZZZ			16:03	
ZZZZZZ			16:07	
CCV 240-84919/112			16:11	
CCB 240-84919/113			16:15	
ZZZZZZ			16:19	
ZZZZZZ			16:23	
ZZZZZZ			16:26	
ZZZZZZ			16:30	
ZZZZZZ			16:34	
ZZZZZZ			16:38	
ZZZZZZ			16:42	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/06/2013 08:24 End Date: 05/06/2013 21:40

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
ZZZZZZ			16:46	
ZZZZZZ			16:50	
ZZZZZZ			16:54	
CCV 240-84919/124			16:58	
CCB 240-84919/125			17:02	
ZZZZZZ			17:06	
ZZZZZZ			17:10	
ZZZZZZ			17:14	
ZZZZZZ			17:18	
ZZZZZZ			17:22	
ZZZZZZ			17:26	
ZZZZZZ			17:30	
ZZZZZZ			17:34	
ZZZZZZ			17:38	
ZZZZZZ			17:42	
CCV 240-84919/136			17:46	
CCB 240-84919/137			17:50	
ZZZZZZ			17:54	
ZZZZZZ			17:58	
CRI 240-84919/140			18:03	
ZZZZZZ			18:06	
ZZZZZZ			18:10	
ZZZZZZ			18:14	
ZZZZZZ			18:18	
ZZZZZZ			18:22	
ZZZZZZ			18:27	
ZZZZZZ			18:31	
CCV 240-84919/148			18:35	
CCB 240-84919/149			18:38	
ZZZZZZ			18:42	
ZZZZZZ			18:46	
ZZZZZZ			18:50	
ZZZZZZ			18:54	
ZZZZZZ			18:58	
ZZZZZZ			19:02	
ZZZZZZ			19:06	
ZZZZZZ			19:10	
ZZZZZZ			19:14	
ZZZZZZ			19:18	
CCV 240-84919/160			19:22	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: I9 Analysis Method: 6010C

Start Date: 05/06/2013 08:24 End Date: 05/06/2013 21:40

Lab Sample Id	D/F	Type	Time	Analytes
				SiO2
CCB 240-84919/161			19:26	
ZZZZZZ			19:30	
ZZZZZZ			19:34	
ZZZZZZ			19:38	
ZZZZZZ			19:41	
ZZZZZZ			19:45	
ZZZZZZ			19:49	
ZZZZZZ			19:53	
ZZZZZZ			19:57	
ZZZZZZ			20:01	
ZZZZZZ			20:05	
CCV 240-84919/172			20:09	
CCB 240-84919/173			20:13	
ZZZZZZ			20:17	
ZZZZZZ			20:21	
ZZZZZZ			20:25	
ZZZZZZ			20:29	
ZZZZZZ			20:33	
ZZZZZZ			20:36	
ZZZZZZ			20:40	
ZZZZZZ			20:44	
ZZZZZZ			20:48	
ZZZZZZ			20:52	
CCV 240-84919/184			20:56	
CCB 240-84919/185			21:00	
ZZZZZZ			21:04	
ZZZZZZ			21:08	
ZZZZZZ			21:12	
ZZZZZZ			21:16	
ZZZZZZ			21:20	
ZZZZZZ			21:24	
ZZZZZZ			21:28	
ZZZZZZ			21:32	
CCV 240-84919/194			21:36	
CCB 240-84919/195			21:40	

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2013 11:12 End Date: 05/06/2013 12:54

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 240-84755/1-A			11:12	X
IC 240-84755/2-A			11:14	X
IC 240-84755/3-A			11:16	X
IC 240-84755/4-A			11:18	X
IC 240-84755/5-A			11:19	X
IC 240-84755/6-A			11:21	X
ICV 240-84755/7-A	1		11:23	X
ICB 240-84755/8-A	1		11:25	X
CRA 240-84755/9-A	1		11:26	X
CCVL 240-84755/10-A	1		11:28	X
CCB 240-84755/11-A	1		11:30	X
ZZZZZZ			11:31	
ZZZZZZ			11:33	
ZZZZZZ			11:35	
ZZZZZZ			11:36	
ZZZZZZ			11:39	
ZZZZZZ			11:41	
ZZZZZZ			11:43	
ZZZZZZ			11:45	
MB 240-84587/1-A	1	T	11:48	X
LCS 240-84587/2-A	1	T	11:50	X
CCV 240-84755/12-A	1		11:52	X
CCB 240-84755/11-A	1		11:54	X
ZZZZZZ			11:56	
240-23744-M-1-E MS	1	T	11:57	X
240-23744-M-1-F MSD	1	T	11:59	X
ZZZZZZ			12:01	
ZZZZZZ			12:03	
ZZZZZZ			12:06	
ZZZZZZ			12:08	
CRA 240-84755/9-A			12:11	
ZZZZZZ			12:14	
240-23812-5	1	T	12:16	X
ZZZZZZ			12:18	
CCV 240-84755/12-A	1		12:20	X
CCB 240-84755/11-A	1		12:22	X
ZZZZZZ			12:23	
ZZZZZZ			12:25	
ZZZZZZ			12:28	
ZZZZZZ			12:30	
ZZZZZZ			12:32	
ZZZZZZ			12:34	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: H4 Analysis Method: 7470A

Start Date: 05/06/2013 11:12 End Date: 05/06/2013 12:54

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			12:37	
ZZZZZZ			12:39	
ZZZZZZ			12:41	
ZZZZZZ			12:42	
CCV 240-84755/12-A			12:44	
CCB 240-84755/11-A			12:46	
ZZZZZZ			12:48	
ZZZZZZ			12:50	
CCV 240-84755/12-A			12:52	
CCB 240-84755/11-A			12:54	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 05/08/2013 11:36 End Date: 05/08/2013 21:27

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 05/08/2013 11:36 End Date: 05/08/2013 21:27

Lab Sample Id	D/F	Type	Time	Analytes																												
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn													
RINSE 440-103278/43			21:25																													
CRI 440-103278/44			21:27																													

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 05/16/2013 18:24 End Date: 05/16/2013 19:37

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-105018/6-A	1		18:24	X
IC 440-105018/7-A	1		18:26	X
IC 440-105018/8-A	1		18:29	X
IC 440-105018/9-A	1		18:31	X
IC 440-105018/10-A	1		18:34	X
IC 440-105018/11-A	1		18:36	X
ICV 440-105018/1-A	1		18:39	X
ICB 440-105018/2-A	1		18:41	X
CRA 440-105018/5-A	1		18:44	X
MB 440-105035/1-A	1	T	18:46	X
LCS 440-105035/2-A	1	T	18:48	X
ZZZZZZ			18:51	
440-46166-G-3-B MS	1	T	18:53	X
440-46166-G-3-C MSD	1	T	18:56	X
ZZZZZZ			18:58	
240-23812-2	1	T	19:00	X
240-23812-3	1	T	19:03	X
240-23812-4	1	T	19:05	X
CCV 440-105018/3-A	1		19:08	X
CCB 440-105018/4-A	1		19:10	X
240-23812-7	1	T	19:13	X
ZZZZZZ			19:15	
ZZZZZZ			19:18	
ZZZZZZ			19:20	
ZZZZZZ			19:23	
ZZZZZZ			19:25	
ZZZZZZ			19:28	
ZZZZZZ			19:30	
CCV 440-105018/3-A	1		19:32	X
CCB 440-105018/4-A	1		19:35	X
CRA 440-105018/5-A	1		19:37	X

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/08/2013 End Date: 05/08/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-103278/1	11:36	100		100		100		100		100	
STD1 440-103278/2	11:38	100		100		100		100		100	
STD2 440-103278/3	11:40	99		100		100		100		101	
STD3 440-103278/4	11:43	98		98		98		98		98	
STD4 440-103278/5	11:45	101		99		99		99		101	
ICV 440-103278/6	11:47	99		99		99		99		100	
ICB 440-103278/7	11:49	101		100		99		99		100	
CRI 440-103278/8	11:52	100		99		100		100		100	
CRI 440-103278/9	11:54	100		100		100		99		100	
ICSA 440-103278/10	11:56	91		100		97		93		93	
ICSAB 440-103278/11	11:59	86		100		97		93		92	
CCV 440-103278/17	20:25	84		91		88		87		95	
CCB 440-103278/18	20:28	85		93		90		89		95	
MB 440-103058/1-A	20:30	88		93		90		89		97	
LCS 440-103058/2-A	20:32	91		92		91		90		95	
440-45233-B-1-B MS	20:37	81		93		86		85		89	
440-45233-B-1-C MSD	20:39	82		93		87		86		90	
440-45233-B-1-A PDS	20:41	82		94		86		85		90	
240-23812-2	20:50	79		99		92		89		90	
CCV 440-103278/29	20:52	93		99		92		92		97	
CCB 440-103278/30	20:55	90		94		91		91		94	
240-23812-3	20:57	85		92		88		87		92	
240-23812-4	20:59	79		92		87		86		89	
240-23812-5	21:02	82		90		87		86		91	
240-23812-7	21:04	81		90		87		86		91	
240-23844-D-6-A SD	21:13	82		91		88		88		93	
CCV 440-103278/39	21:15	82		91		87		87		94	
CCB 440-103278/40	21:18	84		93		90		90		96	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/08/2013 End Date: 05/08/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-103278/1	11:36	100									
STD1 440-103278/2	11:38	100									
STD2 440-103278/3	11:40	102									
STD3 440-103278/4	11:43	98									
STD4 440-103278/5	11:45	101									
ICV 440-103278/6	11:47	100									
ICB 440-103278/7	11:49	100									
CRI 440-103278/8	11:52	100									
CRI 440-103278/9	11:54	101									
ICSA 440-103278/10	11:56	96									
ICSAB 440-103278/11	11:59	95									
CCV 440-103278/17	20:25	97									
CCB 440-103278/18	20:28	97									
MB 440-103058/1-A	20:30	97									
LCS 440-103058/2-A	20:32	98									
440-45233-B-1-B MS	20:37	93									
440-45233-B-1-C MSD	20:39	93									
440-45233-B-1-A PDS	20:41	93									
240-23812-2	20:50	92									
CCV 440-103278/29	20:52	96									
CCB 440-103278/30	20:55	95									
240-23812-3	20:57	95									
240-23812-4	20:59	94									
240-23812-5	21:02	94									
240-23812-7	21:04	95									
240-23844-D-6-A SD	21:13	95									
CCV 440-103278/39	21:15	95									
CCB 440-103278/40	21:18	97									

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84271 Batch Start Date: 05/01/13 09:51 Batch Analyst: McGall, Lisa

Batch Method: 3005A Batch End Date: 05/01/13 19:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAGSPIKEW 00028	MTICP1 00022	MTICP2A 00026	MTTMHCL 00003
MB 240-84271/1		3005A, 6010C		50 mL	50 mL				2.5 mL
LCS 240-84271/2		3005A, 6010C		50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-23812-I-5	MRC-MW-48A-042913	3005A, 6010C	R	50 mL	50 mL				2.5 mL
240-23812-I-5 MS	MRC-MW-48A-042913	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL
240-23812-I-5 MSD	MRC-MW-48A-042913	3005A, 6010C	R	50 mL	50 mL	1 mL	1 mL	1 mL	2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00007					
MB 240-84271/1		3005A, 6010C		1 mL					
LCS 240-84271/2		3005A, 6010C		1 mL					
240-23812-I-5	MRC-MW-48A-042913	3005A, 6010C	R	1 mL					
240-23812-I-5 MS	MRC-MW-48A-042913	3005A, 6010C	R	1 mL					
240-23812-I-5 MSD	MRC-MW-48A-042913	3005A, 6010C	R	1 mL					

Batch Notes	
Filter Paper Lot Number	9453113
Hot Block ID number	hb4, 0
Pipette ID	383364
Digestion Tube/Cup Lot #	1208057

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84587 Batch Start Date: 05/03/13 13:05 Batch Analyst: McGall, Lisa

Batch Method: 7470A Batch End Date: 05/03/13 15:05

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTH2S04 00012	MTHGCALW 00368	MTK2S208RGNT 00039	MTKMN04W 00044
MB 240-84587/1		7470A, 7470A		100 mL	100 mL	5 mL		8 mL	15 mL
LCS 240-84587/2		7470A, 7470A		100 mL	100 mL	5 mL	5 mL	8 mL	15 mL
240-23744-M-1 MS		7470A, 7470A	T	100 mL	100 mL	5 mL	1 mL	8 mL	15 mL
240-23744-M-1 MSD		7470A, 7470A	T	100 mL	100 mL	5 mL	1 mL	8 mL	15 mL
240-23812-I-5	MRC-MW-48A-042913	7470A, 7470A	T	100 mL	100 mL	5 mL		8 mL	15 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTTMHNO3 00007
MB 240-84587/1		7470A, 7470A		2.5 mL
LCS 240-84587/2		7470A, 7470A		2.5 mL
240-23744-M-1 MS		7470A, 7470A	T	2.5 mL
240-23744-M-1 MSD		7470A, 7470A	T	2.5 mL
240-23812-I-5	MRC-MW-48A-042913	7470A, 7470A	T	2.5 mL

Batch Notes	
Pipette ID	383364 383366
Digestion Tube/Cup Lot #	55684

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84755 Batch Start Date: 05/06/13 08:25 Batch Analyst: Sutherland, Aaron

Batch Method: 7470A Batch End Date: 05/06/13 10:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTH2S04 00012	MTHGCALW 00369	MTHgStd 00009	MTK2S208RGNT 00040
ICV 240-84755/7		7470A, 7470A		100 mL	100 mL	5 mL		0.25 mL	8 mL
ICB 240-84755/8		7470A, 7470A		100 mL	100 mL	5 mL			8 mL
CRA 240-84755/9		7470A, 7470A		100 mL	100 mL	5 mL	0.2 mL		8 mL
CCVL 240-84755/10		7470A, 7470A		100 mL	100 mL	5 mL	5 mL		8 mL
CCB 240-84755/11		7470A, 7470A		100 mL	100 mL	5 mL			8 mL
CCV 240-84755/12		7470A, 7470A		100 mL	100 mL	5 mL	5 mL		8 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00044	MTTMHNO3 00007				
ICV 240-84755/7		7470A, 7470A		15 mL	2.5 mL				
ICB 240-84755/8		7470A, 7470A		15 mL	2.5 mL				
CRA 240-84755/9		7470A, 7470A		15 mL	2.5 mL				
CCVL 240-84755/10		7470A, 7470A		15 mL	2.5 mL				
CCB 240-84755/11		7470A, 7470A		15 mL	2.5 mL				
CCV 240-84755/12		7470A, 7470A		15 mL	2.5 mL				

Batch Notes	
Pipette ID	383366-383364

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Batch Number: 103058 Batch Start Date: 05/08/13 12:51 Batch Analyst: Duong, Nghia

Batch Method: 3005A Batch End Date: 05/08/13 17:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ME HCl 00129	ME HNO3 00131	ME ICPMS CAL 00017
MB 440-103058/1		3005A, 6020			50 mL	50 mL	0.25 mL	0.5 mL	
LCS 440-103058/2		3005A, 6020			50 mL	50 mL	0.25 mL	0.5 mL	400 uL
440-45233-B-1 MS		3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	400 uL
440-45233-B-1 MSD		3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	400 uL
240-23812-E-2	MRC-MW41A-042913	3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	
240-23812-D-3	MRC-MW98A-042913	3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	
240-23812-D-4	MRC-MW98B-042913	3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	
240-23812-J-5	MRC-MW-48A-042913	3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	
240-23812-D-7	MRC-MW-111B-042913	3005A, 6020	R	<2	50 mL	50 mL	0.25 mL	0.5 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment
MB 440-103058/1		3005A, 6020		
LCS 440-103058/2		3005A, 6020		
440-45233-B-1 MS		3005A, 6020	R	BP
440-45233-B-1 MSD		3005A, 6020	R	BP
240-23812-E-2	MRC-MW41A-042913	3005A, 6020	R	
240-23812-D-3	MRC-MW98A-042913	3005A, 6020	R	
240-23812-D-4	MRC-MW98B-042913	3005A, 6020	R	
240-23812-J-5	MRC-MW-48A-042913	3005A, 6020	R	
240-23812-D-7	MRC-MW-111B-042913	3005A, 6020	R	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Batch Number: 103058 Batch Start Date: 05/08/13 12:51 Batch Analyst: Duong, Nghia

Batch Method: 3005A Batch End Date: 05/08/13 17:50

Batch Notes	
Batch Comment	SPike ICP/MS: 400 uL
First End time	17:28
Filter Paper Lot Number	Filtermate 21102756-3081
Lot # of hydrochloric acid	0000024317
Lot # of Nitric Acid	L10022
Hood ID or number	7
Hot Block ID number	1
Oven, Bath or Block Temperature 1	91
Oven, Bath or Block Temperature 2	91
pH Paper Lot Number	HC379740
Pipette ID	138
First Start time	13:21
ID number of the thermometer	P-094 Loc; C13 CF: -1.0
Digestion Tube/Cup Lot #	ML27KK03
Uncorrected Temperature	92 Celsius
Uncorrected Temperature 2	92 Celsius

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Batch Number: 105018 Batch Start Date: 05/16/13 10:25 Batch Analyst: McKenzie, Matthew

Batch Method: 245.1 Batch End Date: 05/16/13 12:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ME 1PPM HG1 00081	ME 1PPM HG2 00079	ME H2SO4 00023	ME HNO3 00135
ICV 440-105018/1		245.1, 7470A		20 mL	20 mL		160 uL	1 mL	0.5 mL
ICB 440-105018/2		245.1, 7470A		20 mL	20 mL			1 mL	0.5 mL
CCV 440-105018/3		245.1, 7470A		20 mL	20 mL	80 uL		1 mL	0.5 mL
CCB 440-105018/4		245.1, 7470A		20 mL	20 mL			1 mL	0.5 mL
CRA 440-105018/5		245.1, 7470A		20 mL	20 mL	4 uL		1 mL	0.5 mL
IC 440-105018/6		245.1, 7470A		20 mL	20 mL			1 mL	0.5 mL
IC 440-105018/7		245.1, 7470A		20 mL	20 mL	40 uL		1 mL	0.5 mL
IC 440-105018/8		245.1, 7470A		20 mL	20 mL	20 uL		1 mL	0.5 mL
IC 440-105018/9		245.1, 7470A		20 mL	20 mL	100 uL		1 mL	0.5 mL
IC 440-105018/10		245.1, 7470A		20 mL	20 mL	200 uL		1 mL	0.5 mL
IC 440-105018/11		245.1, 7470A		20 mL	20 mL	300 uL		1 mL	0.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HYDROX SOL 00022	ME K2S2O8 00021	ME KMNO4 00042			
ICV 440-105018/1		245.1, 7470A		2 mL	1.6 mL	3 mL			
ICB 440-105018/2		245.1, 7470A		2 mL	1.6 mL	3 mL			
CCV 440-105018/3		245.1, 7470A		2 mL	1.6 mL	3 mL			
CCB 440-105018/4		245.1, 7470A		2 mL	1.6 mL	3 mL			
CRA 440-105018/5		245.1, 7470A		2 mL	1.6 mL	3 mL			
IC 440-105018/6		245.1, 7470A		2 mL	1.6 mL	3 mL			
IC 440-105018/7		245.1, 7470A		2 mL	1.6 mL	3 mL			
IC 440-105018/8		245.1, 7470A		2 mL	1.6 mL	3 mL			
IC 440-105018/9		245.1, 7470A		2 mL	1.6 mL	3 mL			
IC 440-105018/10		245.1, 7470A		2 mL	1.6 mL	3 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Batch Number: 105018 Batch Start Date: 05/16/13 10:25 Batch Analyst: McKenzie, Matthew

Batch Method: 245.1 Batch End Date: 05/16/13 12:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HYDROX SOL 00022	ME K2S2O8 00021	ME KMN04 00042			
IC 440-105018/11		245.1, 7470A		2 mL	1.6 mL	3 mL			

Batch Notes	
Hydroxylamine Sulfate Lot Number	Added 12:30 5-16-13
Hood ID or number	3
Hot Block ID number	2
Oven, Bath or Block Temperature 1	93 C (uncorrected 92) Degrees C
Oven, Bath or Block Temperature 2	93 C (uncorrected 92) Degrees C
Pipette ID	51
ID number of the thermometer	P-059 CF - +1.0 Loc - C10
Digestion Tube/Cup Lot #	ML27KK03

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Batch Number: 105035 Batch Start Date: 05/16/13 12:51 Batch Analyst: McKenzie, Matthew

Batch Method: 7470A Batch End Date: 05/16/13 14:51

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ME 1PPM HG1 00081	ME H2SO4 00023	ME HNO3 00135
MB 440-105035/1		7470A, 7470A			20 mL	20 mL		1 mL	0.5 mL
LCS 440-105035/2		7470A, 7470A			20 mL	20 mL	160 uL	1 mL	0.5 mL
440-46166-G-3 MS		7470A, 7470A	T	<2	20 mL	20 mL	160 uL	1 mL	0.5 mL
440-46166-G-3 MSD		7470A, 7470A	T	<2	20 mL	20 mL	160 uL	1 mL	0.5 mL
240-23812-E-2	MRC-MW41A-042913	7470A, 7470A	T	<2	20 mL	20 mL		1 mL	0.5 mL
240-23812-D-3	MRC-MW98A-042913	7470A, 7470A	T	<2	20 mL	20 mL		1 mL	0.5 mL
240-23812-D-4	MRC-MW98B-042913	7470A, 7470A	T	<2	20 mL	20 mL		1 mL	0.5 mL
240-23812-D-7	MRC-MW-111B-042913	7470A, 7470A	T	<2	20 mL	20 mL		1 mL	0.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	ME HYDROX SOL 00022	ME K2S2O8 00021	ME KMNO4 00042			
MB 440-105035/1		7470A, 7470A		2 mL	1.6 mL	3 mL			
LCS 440-105035/2		7470A, 7470A		2 mL	1.6 mL	3 mL			
440-46166-G-3 MS		7470A, 7470A	T	2 mL	1.6 mL	3 mL			
440-46166-G-3 MSD		7470A, 7470A	T	2 mL	1.6 mL	3 mL			
240-23812-E-2	MRC-MW41A-042913	7470A, 7470A	T	2 mL	1.6 mL	3 mL			
240-23812-D-3	MRC-MW98A-042913	7470A, 7470A	T	2 mL	1.6 mL	3 mL			
240-23812-D-4	MRC-MW98B-042913	7470A, 7470A	T	2 mL	1.6 mL	3 mL			
240-23812-D-7	MRC-MW-111B-042913	7470A, 7470A	T	2 mL	1.6 mL	3 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Irvine Job No.: 240-23812-1

SDG No.:

Batch Number: 105035 Batch Start Date: 05/16/13 12:51 Batch Analyst: McKenzie, Matthew

Batch Method: 7470A Batch End Date: 05/16/13 14:51

Batch Notes	
Hydroxylamine Sulfate Lot Number	Added 15:00 5-16-13
Hood ID or number	3
Hot Block ID number	2
Oven, Bath or Block Temperature 1	94 Celsius
Oven, Bath or Block Temperature 2	94 Celsius
Pipette ID	51
ID number of the thermometer	P-059 CF - +1.0 Loc - C10
Digestion Tube/Cup Lot #	ML27KK03
Uncorrected Temperature	93 Celsius
Uncorrected Temperature 2	93 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG No.:

Project: MRC 2013 GW SAMPLING, MD

Client Sample ID	Lab Sample ID
MRC-MW-48A-042913	240-23812-5

Comments:

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Analyst: LG Batch Start Date: 04/23/2013

Reporting Units: mg/L Analytical Batch No.: 83184

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	15:16	Chloride	52.7	50.0	105	90-110		WCICLCS_00181
			Sulfate	49.4	50.0	99	90-110		WCICLCS_00181

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Analyst: AM Batch Start Date: 04/30/2013

Reporting Units: mg/L Analytical Batch No.: 84229

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	18:40	Nitrite as N	2.44	2.50	97	90-110		WCICCCV_00271
			Nitrate as N	2.56	2.50	102	90-110		WCICCCV_00271
			Orthophosphate as P	2.35	2.50	94	90-110		WCICCCV_00271
2	CCB	18:57	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	
13	CCV	22:09	Nitrite as N	2.45	2.50	98	90-110		WCICCCV_00271
			Nitrate as N	2.54	2.50	102	90-110		WCICCCV_00271
			Orthophosphate as P	2.43	2.50	97	90-110		WCICCCV_00271
14	CCB	22:26	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate as P	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Analyst: AM Batch Start Date: 05/06/2013

Reporting Units: mg/L Analytical Batch No.: 84749

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	08:26	Chloride	45.8	50.0	92	90-110		WCICCCV_00271
2	CCB	08:42	Chloride	1.0				U	
12	CCV	16:58	Chloride	50.9	50.0	102	90-110		WCICCCV_00271
			Sulfate	48.0	50.0	96	90-110		WCICCCV_00271
13	CCB	17:14	Chloride	0.119				J	
			Sulfate	1.0				U	
24	CCV	20:15	Chloride	51.3	50.0	103	90-110		WCICCCV_00271
			Sulfate	48.6	50.0	97	90-110		WCICCCV_00271
25	CCB	20:31	Chloride	1.0				U	
			Sulfate	1.0				U	
36	CCV	23:32	Chloride	51.8	50.0	104	90-110		WCICCCV_00271
			Sulfate	49.2	50.0	98	90-110		WCICCCV_00271
37	CCB	23:48	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Analyst: JK Batch Start Date: 05/02/2013

Reporting Units: mg/L Analytical Batch No.: 84533

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	08:38	Ammonia (as N)	6.24	6.86	91	90-110		WCSIMPNUTRNT_00022
6	ICB	08:39	Ammonia (as N)	0.0577				J	
17	CCV	12:51	Ammonia (as N)	2.26	2.50	91	90-110		WCNH31000_00021
18	CCB	12:51	Ammonia (as N)	0.20				U	
29	CCV	15:17	Ammonia (as N)	2.38	2.50	95	90-110		WCNH31000_00021
30	CCB	15:17	Ammonia (as N)	0.20				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Analyst: TH Batch Start Date: 05/01/2013

Reporting Units: mg/L Analytical Batch No.: 84408

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	07:37	Dissolved Organic Carbon	25.1	25.0	100	90-110		WC TOC CCV_00131
2	CCB	07:48	Dissolved Organic Carbon	1.0				U	
11	CCV	12:50	Dissolved Organic Carbon	25.7	25.0	103	90-110		WC TOC CCV_00131
12	CCB	13:01	Dissolved Organic Carbon	1.0				U	
21	CCV	19:34	Dissolved Organic Carbon	25.3	25.0	101	90-110		WC TOC CCV_00131
22	CCB	19:45	Dissolved Organic Carbon	1.0				U	
23	CCV	06:12	Dissolved Organic Carbon	24.5	25.0	98	90-110		WC TOC CCV_00131
24	CCB	06:23	Dissolved Organic Carbon	1.0				U	
27	CCV	06:55	Dissolved Organic Carbon	24.8	25.0	99	90-110		WC TOC CCV_00131
28	CCB	07:06	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 84496	Date: 05/02/2013 12:42						
160.1	MB 240-84496/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID: 84229	Date: 04/30/2013 19:15						
300.0	MB 240-84229/3	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-84229/3	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-84229/3	Orthophosphate as P	0.50	U	mg/L	0.50	1
Batch ID: 84749	Date: 05/06/2013 08:59						
300.0	MB 240-84749/3	Chloride	0.264	J	mg/L	1.0	1
Batch ID: 84749	Date: 05/06/2013 20:48						
300.0	MB 240-84749/26	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-84749/26	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 84987	Date: 05/06/2013 16:34						
310.1	MB 240-84987/9	Alkalinity	5.0	U	mg/L	5.0	1
Batch ID: 84533	Date: 05/02/2013 08:39						
350.3	MB 240-84533/7	Ammonia (as N)	0.0524	J	mg/L	0.20	1
Batch ID: 84408	Date: 05/01/2013 07:59						
9060	MB 240-84408/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 84229	Date: 04/30/2013 20:07										
300.0	240-23812-5	Nitrite as N	0.10	U	mg/L						
300.0	240-23812-5 MS	Nitrite as N	2.65		mg/L	2.50	106	80-120			
300.0	240-23812-5	Nitrate as N	0.10	U	mg/L						
300.0	240-23812-5 MS	Nitrate as N	2.54		mg/L	2.50	102	80-120			
300.0	240-23812-5	Orthophosphate as P	0.50	U	mg/L						
300.0	240-23812-5 MS	Orthophosphate as P	0.387	J	mg/L	2.50	15	80-120			F
Batch ID: 84749	Date: 05/06/2013 17:47										
300.0	240-23812-5	Chloride	73		mg/L						B
300.0	240-23812-5 MS	Chloride	133		mg/L	50.0	119	80-120			
300.0	240-23812-5	Sulfate	6.6		mg/L						
300.0	240-23812-5 MS	Sulfate	60.5		mg/L	50.0	108	80-120			
Batch ID: 84987	Date: 05/06/2013 17:11										
310.1	240-23809-O-1	Alkalinity	250		mg/L						
310.1	240-23809-O-1 MS	Alkalinity	553		mg/L	500	61	10-160			
Batch ID: 84533	Date: 05/02/2013 13:13										
350.3	240-23705-A-1	Ammonia (as N)	0.42		mg/L						B
350.3	240-23705-A-1 MS	Ammonia (as N)	3.25		mg/L	2.50	113	75-125			
Batch ID: 84408	Date: 05/01/2013 15:57										
9060	240-23750-I-3	Dissolved Organic Carbon	5.1		mg/L						
9060	240-23750-I-3 MS	Dissolved Organic Carbon	29.5		mg/L	25.0	97	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 84987		Date: 05/06/2013 17:28									
310.1	240-23809-O-1 MSD	Alkalinity	529		mg/L	500	56	10-160	4	24	
Batch ID: 84533		Date: 05/02/2013 13:17									
350.3	240-23705-A-1 MSD	Ammonia (as N)	3.09		mg/L	2.50	107	75-125	5	20	
Batch ID: 84408		Date: 05/02/2013 06:44									
9060	240-23682-U-2 MSD	Dissolved Organic Carbon	29.4		mg/L	25.0	97	72-136	1	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	84496	Date: 05/02/2013 12:42						
160.1		240-23788-F-1	Total Dissolved Solids	46	mg/L			
160.1		240-23788-F-1 DU	Total Dissolved Solids	48.0	mg/L	4	20	
Batch ID:	84987	Date: 05/06/2013 16:55						
310.1		240-23809-O-1	Alkalinity	250	mg/L			
310.1		240-23809-O-1 DU	Alkalinity	242	mg/L	4	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 84496	Date: 05/02/2013 12:42										
						LCS Source: WCPHENOVSOLID_00002					
160.1	LCS 240-84496/2	Total Dissolved Solids	454		mg/L	499	91	88-110			
Batch ID: 84229	Date: 04/30/2013 19:32										
						LCS Source: WCICLCS_00183					
300.0	LCS 240-84229/4	Nitrite as N	2.44		mg/L	2.50	97	90-110			
300.0	LCS 240-84229/4	Nitrate as N	2.64		mg/L	2.50	106	90-110			
300.0	LCS 240-84229/4	Orthophosphate as P	2.41		mg/L	2.50	96	90-110			
Batch ID: 84749	Date: 05/06/2013 09:15										
						LCS Source: WCICLCS_00183					
300.0	LCS 240-84749/4	Chloride	48.9		mg/L	50.0	98	90-110			
Batch ID: 84749	Date: 05/06/2013 21:04										
						LCS Source: WCICLCS_00183					
300.0	LCS 240-84749/27	Chloride	52.4		mg/L	50.0	105	90-110			
300.0	LCS 240-84749/27	Sulfate	48.6		mg/L	50.0	97	90-110			
Batch ID: 84987	Date: 05/06/2013 16:28										
						LCS Source: WCPHENOMINER_00003					
310.1	LCS 240-84987/8	Alkalinity	78.3		mg/L	79.5	99	90-127			
Batch ID: 84533	Date: 05/02/2013 08:40										
						LCS Source: WCSIMPNUTRNT_00022					
350.3	LCS 240-84533/8	Ammonia (as N)	6.65		mg/L	6.86	97	85-114			
Batch ID: 84408	Date: 05/01/2013 08:10										
						LCS Source: WC LCS_00007					
9060	LCS 240-84408/4	Dissolved Organic Carbon	48.9		mg/L	48.1	102	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: GARFUNKEL

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate as P		0.5	0.044

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-23812-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: STEVE Analysis Method: 310.1

Start Date: 05/06/2013 12:38 End Date: 05/06/2013 20:43

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			12:38	
RINSE 240-84987/2			12:47	
ZZZZZZ			13:01	
STD1 240-84987/4 IC			13:20	X
STD2 240-84987/5 IC			13:39	X
STD3 240-84987/6 IC			13:56	X
ZZZZZZ			14:00	
LCS 240-84987/8	1	T	16:28	X
MB 240-84987/9	1	T	16:34	X
ZZZZZZ			16:45	
240-23809-O-1 DU	1	T	16:55	X
240-23809-O-1 MS	1	T	17:11	X
240-23809-O-1 MSD	1	T	17:28	X
ZZZZZZ			17:37	
240-23812-5	1	T	17:44	X
ZZZZZZ			17:54	
ZZZZZZ			18:06	
ZZZZZZ			18:09	
ZZZZZZ			18:20	
ZZZZZZ			18:30	
ZZZZZZ			18:39	
ZZZZZZ			18:47	
ZZZZZZ			18:52	
ZZZZZZ			19:01	
ZZZZZZ			19:09	
ZZZZZZ			19:17	
ZZZZZZ			19:25	
ZZZZZZ			19:32	
ZZZZZZ			19:36	
ZZZZZZ			19:45	
ZZZZZZ			19:51	
ZZZZZZ			19:58	
ZZZZZZ			20:12	
ZZZZZZ			20:21	
ZZZZZZ			20:39	
ZZZZZZ			20:43	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 160.1

Start Date: 05/02/2013 12:42 End Date: 05/02/2013 12:42

Lab Sample Id	D/F	Type	Time	Analytes
				TDS
MB 240-84496/1	1	T	12:42	X
LCS 240-84496/2	2	T	12:42	X
240-23788-F-1 DU	1	T	12:42	X
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
240-23812-5	1	T	12:42	X
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	
ZZZZZZ			12:42	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: GARFUNKEL Analysis Method: 300.0

Start Date: 04/30/2013 18:40 End Date: 04/30/2013 23:53

Lab Sample Id	D/F	Type	Time	Analytes		
				N-No2	NO3	Orthophosp
CCV 240-84229/1	1		18:40	X	X	X
CCB 240-84229/2	1		18:57	X	X	X
MB 240-84229/3	1	T	19:15	X	X	X
LCS 240-84229/4	1	T	19:32	X	X	X
240-23812-5	1	T	19:49	X	X	X
240-23812-5 MS	1	T	20:07	X	X	X
ZZZZZZ			20:24			
ZZZZZZ			20:42			
ZZZZZZ			20:59			
ZZZZZZ			21:16			
ZZZZZZ			21:34			
ZZZZZZ			21:51			
CCV 240-84229/13	1		22:09	X	X	X
CCB 240-84229/14	1		22:26	X	X	X
ZZZZZZ			22:43			
ZZZZZZ			23:01			
ZZZZZZ			23:18			
CCV 240-84229/18			23:36			
CCB 240-84229/19			23:53			

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 04/23/2013 11:59 End Date: 04/23/2013 15:32

Lab Sample Id	D/F	Type	Time	Analytes																													
				CL-	SO4																												
ZZZZZZ			11:59																														
ZZZZZZ			12:15																														
STD1 240-83184/3 IC	1		12:32	X	X																												
STD2 240-83184/4 IC	1		12:48	X	X																												
STD3 240-83184/5 IC	1		13:05	X	X																												
STD4 240-83184/6 IC	1		13:21	X	X																												
STD5 240-83184/7 ICRT	1		13:37	X	X																												
STD6 240-83184/8 IC	1		13:54	X	X																												
STD7 240-83184/9 IC	1		14:10	X	X																												
STD8 240-83184/10 IC	1		14:27	X	X																												
STD9 240-83184/11 IC	1		14:43	X	X																												
ZZZZZZ			14:59																														
ICV 240-83184/13	1		15:16	X	X																												
ICB 240-83184/14			15:32																														

Prep Types:

=

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 05/06/2013 08:26 End Date: 05/07/2013 02:49

| Lab Sample Id | D/F | Type | Time | Analytes | | |

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: SIMON Analysis Method: 300.0

Start Date: 05/06/2013 08:26 End Date: 05/07/2013 02:49

Lab Sample Id	D/F	Type	Time	Analytes																										
				Cl-	SO4																									
ZZZZZZ			01:10																											
ZZZZZZ			01:27																											
ZZZZZZ			01:43																											
ZZZZZZ			02:00																											
ZZZZZZ			02:16																											
CCV 240-84749/47			02:32																											
CCB 240-84749/48			02:49																											

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: DAVE Analysis Method: 350.3

Start Date: 05/02/2013 08:38 End Date: 05/02/2013 15:47

Lab Sample Id	D/F	Type	Time	Analytes
				NH3
IC 240-84533/1			08:38	X
IC 240-84533/2			08:38	X
IC 240-84533/3			08:38	X
IC 240-84533/4			08:38	X
ICV 240-84533/5	5		08:38	X
ICB 240-84533/6	1		08:39	X
MB 240-84533/7	1	T	08:39	X
LCS 240-84533/8	5	T	08:40	X
ZZZZZZ			10:37	
ZZZZZZ			10:37	
ZZZZZZ			10:37	
ZZZZZZ			10:37	
ZZZZZZ			10:37	
ZZZZZZ			10:37	
ZZZZZZ			10:37	
ZZZZZZ			10:44	
CCV 240-84533/17	1		12:51	X
CCB 240-84533/18	1		12:51	X
ZZZZZZ			13:02	
240-23705-A-1 MS	1	T	13:13	X
240-23705-A-1 MSD	1	T	13:17	X
ZZZZZZ			13:32	
ZZZZZZ			13:32	
ZZZZZZ			13:32	
ZZZZZZ			13:33	
ZZZZZZ			15:17	
ZZZZZZ			15:17	
240-23812-5	1	T	15:17	X
CCV 240-84533/29	1		15:17	X
CCB 240-84533/30	1		15:17	X
ZZZZZZ			15:17	
ZZZZZZ			15:17	
ZZZZZZ			15:28	
ZZZZZZ			15:28	
CCV 240-84533/35			15:32	
CCB 240-84533/36			15:47	

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Instrument ID: SPARKY Analysis Method: 9060

Start Date: 05/01/2013 07:37 End Date: 05/02/2013 07:06

Lab Sample Id	D/F	Type	Time	Analytes
				DOC
CCV 240-84408/1	1		07:37	X
CCB 240-84408/2	1		07:48	X
MB 240-84408/3	1	D	07:59	X
LCS 240-84408/4	2	D	08:10	X
ZZZZZZ			08:21	
ZZZZZZ			09:24	
ZZZZZZ			10:05	
ZZZZZZ			10:46	
ZZZZZZ			11:28	
ZZZZZZ			12:09	
CCV 240-84408/11	1		12:50	X
CCB 240-84408/12	1		13:01	X
ZZZZZZ			13:12	
ZZZZZZ			13:53	
ZZZZZZ			14:34	
ZZZZZZ			15:16	
240-23750-I-3 MS	2	D	15:57	X
ZZZZZZ			16:08	
ZZZZZZ			16:49	
240-23812-5	1	D	18:53	X
CCV 240-84408/21	1		19:34	X
CCB 240-84408/22	1		19:45	X
CCV 240-84408/23	1		06:12	X
CCB 240-84408/24	1		06:23	X
ZZZZZZ			06:34	
240-23682-U-2 MSD	2	D	06:44	X
CCV 240-84408/27	1		06:55	X
CCB 240-84408/28	1		07:06	X

Prep Types:
D = Dissolved

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84987 Batch Start Date: 05/06/13 12:38 Batch Analyst: Burns, Jill

Batch Method: 310.1 Batch End Date: 05/06/13 20:43

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	CalcMsg	FinalAmount	WCALKMSMSD 00006	WCPHENOMINER 00003	
LCS 240-84987/8		310.1		50 mL	BuretStart2 is blank	50 mL		50 mL	
MB 240-84987/9		310.1		50 mL	BuretStart2 is blank	50 mL			
240-23809-O-1 DU		310.1	T	50 mL	BuretStart2 is blank	50 mL			
240-23809-O-1 MS		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-23809-O-1 MSD		310.1	T	50 mL	BuretStart2 is blank	50 mL	1 mL		
240-23812-K-5	MRC-MW-48A-042913	310.1	T	50 mL	BuretStart2 is blank	50 mL			

Batch Notes	
pH Buffer 1 ID	965136
pH Buffer 2 ID	962302
pH Buffer 3 ID	925074
Sulfuric Acid Lot Number	971480
Nominal Amount Used	100 mL
Pipette ID	927753
Probe ID	WCP92
Normality of first Titrant	.0197 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84496 Batch Start Date: 05/02/13 12:42 Batch Analyst: Burns, Jill

Batch Method: 160.1 Batch End Date: 05/03/13 17:14

Lab Sample ID	Client Sample ID	Method Chain	Basis	Conductivity	InitialAmount	TareWeight	Weight1	Weight2	Weight3
MB 240-84496/1		160.1			100 mL	72.2460 g	72.2460 g	72.2460 g	0 g
LCS 240-84496/2		160.1			100 mL	72.1035 g	72.1265 g	72.1262 g	0 g
240-23788-F-1 DU		160.1	T	110 umhos/cm	100 mL	70.4242 g	70.4290 g	70.4290 g	0 g
240-23812-K-5	MRC-MW-48A-042913	160.1	T	350 umhos/cm	100 mL	76.0547 g	76.0733 g	76.0735 g	0 g

Lab Sample ID	Client Sample ID	Method Chain	Basis	WeightOne%Diff	Residue	Residue2	FinalAmount	WCPHENOVSOLID 00002	
MB 240-84496/1		160.1		PASS_D	0.00000 g	0.00000 g	100 mL		
LCS 240-84496/2		160.1		PASS_D	0.02300 g	0.02270 g	100 mL	50 mL	
240-23788-F-1 DU		160.1	T	PASS_D	0.00480 g	0.00480 g	100 mL		
240-23812-K-5	MRC-MW-48A-042913	160.1	T	PASS_D	0.01860 g	0.01880 g	100 mL		

Batch Notes	
Balance ID	B044
Batch Comment	PREP [IN O04 05/02/13 14:50 96C]
Constant Weight (WT2) Date/Time in Oven	05/03/13 12:28
Constant Weight (WT2) Temp In	181 Celsius
Filter Paper Lot Number	950446
Date samples were placed in the oven	05/03/13 09:30
Oven Temp when samples are put in oven	180 Celsius
Nominal Amount Used	100 mL
Date samples were removed from oven	05/03/13 11:07
Oven Temp when samples removed from oven	178 Celsius
Oven ID	O01
Pipette ID	927753

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 83184 Batch Start Date: 04/23/13 11:59 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/23/13 15:32

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00102	WCICLCS 00181			
STD1 240-83184/3		300.0		5 mL	0.025 mL				
STD2 240-83184/4		300.0		5 mL	0.125 mL				
STD3 240-83184/5		300.0		5 mL	0.25 mL				
STD4 240-83184/6		300.0		5 mL	0.5 mL				
STD5 240-83184/7		300.0		5 mL	1.25 mL				
STD6 240-83184/8		300.0		5 mL	2 mL				
STD7 240-83184/9		300.0		5 mL	2.5 mL				
STD8 240-83184/10		300.0		5 mL	3.75 mL				
STD9 240-83184/11		300.0		5 mL	5 mL				
ICV 240-83184/13		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 83187 Batch Start Date: 04/23/13 12:00 Batch Analyst: Grossman, Lucas

Batch Method: 300.0 Batch End Date: 04/23/13 15:46

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCALSOLN 00103				
STD1 240-83187/3		300.0		5 mL	0.025 mL				
STD2 240-83187/4		300.0		5 mL	0.125 mL				
STD3 240-83187/5		300.0		5 mL	0.25 mL				
STD4 240-83187/6		300.0		5 mL	0.5 mL				
STD5 240-83187/7		300.0		5 mL	1.25 mL				
STD6 240-83187/8		300.0		5 mL	2 mL				
STD7 240-83187/9		300.0		5 mL	2.5 mL				
STD8 240-83187/10		300.0		5 mL	3.75 mL				
STD9 240-83187/11		300.0		5 mL	5 mL				

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84229 Batch Start Date: 04/30/13 18:40 Batch Analyst: Martin, Aaron

Batch Method: 300.0 Batch End Date: 04/30/13 23:53

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	WCICCCV 00271	WCICELUENT 00080	WCICLCS 00183	WCICSOLNA1 00008	WCICSOLNB1 00008
CCV 240-84229/1		300.0		5 mL	5 mL				
CCB 240-84229/2		300.0		5 mL		5 mL			
MB 240-84229/3		300.0		5 mL		5 mL			
LCS 240-84229/4		300.0		5 mL			5 mL		
240-23812-K-5	MRC-MW-48A-042913	300.0	T	5 mL					
240-23812-K-5 MS	MRC-MW-48A-042913	300.0	T	5 mL				0.1 mL	0.1 mL
CCV 240-84229/13		300.0		5 mL	5 mL				
CCB 240-84229/14		300.0		5 mL		5 mL			

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84749 Batch Start Date: 05/06/13 08:26 Batch Analyst: Martin, Aaron

Batch Method: 300.0 Batch End Date: 05/07/13 02:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCICCCV 00271	WCICELUENT 00080	WCICLCS 00183	WCICSOLNA1 00008
CCV 240-84749/1		300.0		5 mL	5 mL	5 mL			
CCB 240-84749/2		300.0		5 mL	5 mL		5 mL		
MB 240-84749/3		300.0		5 mL	5 mL		5 mL		
LCS 240-84749/4		300.0		5 mL	5 mL			5 mL	
CCV 240-84749/12		300.0		5 mL	5 mL	5 mL			
CCB 240-84749/13		300.0		5 mL	5 mL		5 mL		
240-23812-K-5	MRC-MW-48A-042913	300.0	T	5 mL	5 mL				
240-23812-K-5 MS	MRC-MW-48A-042913	300.0	T	5 mL	5 mL				0.1 mL
CCV 240-84749/24		300.0		5 mL	5 mL	5 mL			
CCB 240-84749/25		300.0		5 mL	5 mL		5 mL		
MB 240-84749/26		300.0		5 mL	5 mL		5 mL		
LCS 240-84749/27		300.0		5 mL	5 mL			5 mL	
CCV 240-84749/36		300.0		5 mL	5 mL	5 mL			
CCB 240-84749/37		300.0		5 mL	5 mL		5 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCICSOLNB1 00008					
CCV 240-84749/1		300.0							
CCB 240-84749/2		300.0							
MB 240-84749/3		300.0							
LCS 240-84749/4		300.0							
CCV 240-84749/12		300.0							
CCB 240-84749/13		300.0							
240-23812-K-5	MRC-MW-48A-042913	300.0	T						
240-23812-K-5 MS	MRC-MW-48A-042913	300.0	T	0.1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84749 Batch Start Date: 05/06/13 08:26 Batch Analyst: Martin, Aaron

Batch Method: 300.0 Batch End Date: 05/07/13 02:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	WCICSOLNB1 00008					
CCV 240-84749/24		300.0							
CCB 240-84749/25		300.0							
MB 240-84749/26		300.0							
LCS 240-84749/27		300.0							
CCV 240-84749/36		300.0							
CCB 240-84749/37		300.0							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84533 Batch Start Date: 05/02/13 08:38 Batch Analyst: Kuhle, Julie

Batch Method: 350.3 Batch End Date: 05/02/13 15:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WCNH31000 00021	WCSIMPNUTRNT 00022		
ICV 240-84533/5		350.3		50 mL	50 mL		10 mL		
ICB 240-84533/6		350.3		50 mL	50 mL				
MB 240-84533/7		350.3		50 mL	50 mL				
LCS 240-84533/8		350.3		50 mL	50 mL		10 mL		
CCV 240-84533/17		350.3		50 mL	50 mL	0.125 mL			
CCB 240-84533/18		350.3		50 mL	50 mL				
240-23705-A-1 MS		350.3	T	50 mL	50 mL	0.125 mL			
240-23705-A-1 MSD		350.3	T	50 mL	50 mL	0.125 mL			
240-23812-H-5	MRC-MW-48A-042913	350.3	T	50 mL	50 mL				
CCV 240-84533/29		350.3		50 mL	50 mL	0.125 mL			
CCB 240-84533/30		350.3		50 mL	50 mL				

Batch Notes	
Batch Comment	beakers 937711
Buffer Reagent ID Number	937651
Pipette ID	380195 9227762

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-23812-1

SDG No.:

Batch Number: 84408 Batch Start Date: 05/01/13 07:37 Batch Analyst: Harshman, Tom

Batch Method: 9060 Batch End Date: 05/02/13 07:06

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	WC LCS 00007	WC TOC CCV 00131		
CCV 240-84408/1		9060		40 mL	40 mL		40 mL		
CCB 240-84408/2		9060		40 mL	40 mL				
MB 240-84408/3		9060		40 mL	40 mL				
LCS 240-84408/4		9060		40 mL	40 mL	40 mL			
CCV 240-84408/11		9060		40 mL	40 mL		40 mL		
CCB 240-84408/12		9060		40 mL	40 mL				
240-23750-I-3 MS		9060	D	40 mL	40 mL		20 mL		
240-23812-F-5	MRC-MW-48A-042913	9060	D	40 mL	40 mL				
CCV 240-84408/21		9060		40 mL	40 mL		40 mL		
CCB 240-84408/22		9060		40 mL	40 mL				
CCV 240-84408/23		9060		40 mL	40 mL		40 mL		
CCB 240-84408/24		9060		40 mL	40 mL				
240-23682-U-2 MSD		9060	D	40 mL	40 mL		20 mL		
CCV 240-84408/27		9060		40 mL	40 mL		40 mL		
CCB 240-84408/28		9060		40 mL	40 mL				

Batch Notes	
Lot # of Phosphoric Acid	836446
Sodium Persulfate Reagent ID Number	957417

Basis	Basis Description
D	Dissolved

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Sample Report

MRC-MW41A-04/29/13

Sample Table

Sample Name	240-23812-E-2-A
Data File Name	222SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1305
Acq Date Time	2013-05-08T20:50:35-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-103058 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

CO: 550ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	1.008	1.008	3.40	4683	3.65	3000	
Na	23	1	No Gas	OR	OR	#VALUE!	OR	#VALUE!	100000	
Mg	24	1	No Gas	76706.592	76706.592	0.70	1482151443	0.69	112500	
Al	27	1	No Gas	72.992	72.992	17.58	1901337	15.99	4000	
K	39	1	No Gas	5433.956	5433.956	1.18	169829447	0.43	87500	
Ca	44	1	No Gas	38926.742	38926.742	2.25	38505142	1.12	225000	
V	51	1	No Gas	0.276	0.276	15.71	11326	14.16	4000	
Cr	52	1	No Gas	0.693	0.693	4.48	37065	2.29	4000	
Mn	55	1	No Gas	19129.846	19129.846	0.73	873424125	0.49	4000	>LDR
Fe	56	1	No Gas	53857.680	53857.680	1.45	2038971723	0.79	40000	>LDR
Co	59	1	No Gas	*546.421	546.421	1.94	20016751	0.81	4000	
Ni	60	1	No Gas	398.101	398.101	1.89	3199761	0.82	4000	
Cu	65	1	No Gas	1.153	1.153	3.31	12096	2.91	4000	
Zn	66	1	No Gas	39.182	39.182	0.84	237059	0.21	2500	
As	75	1	No Gas	0.984	0.984	7.46	4374	6.99	4000	
Se	82	1	No Gas	0.034	0.034	372.55	77	56.51	4000	
Sr	88	1	No Gas	369.383	369.383	0.59	17285972	0.51	4000	
Mo	95	1	No Gas	0.259	0.259	3.78	2618	3.91	4000	
[Mo]	98	1	No Gas	0.174	0.174	3.16	2967	2.85	4000	
Ag	107	1	No Gas	0.027	0.027	18.23	921	12.64	100	
Cd	111	1	No Gas	0.076	0.076	19.41	390	17.03	4000	
[Cd]	114	1	No Gas	0.075	0.075	1.99	850	1.67	4000	
Sn	118	1	No Gas	0.076	0.076	11.67	1736	7.04	4000	
Sb	123	1	No Gas	-0.001	-0.001	-345.48	1951	4.19	4000	
Ba	137	1	No Gas	614.273	614.273	0.75	4386042	0.76	4000	
Ce	140	1	No Gas	6.518	6.518	0.85	422521	0.35	4000	
Tl	205	1	No Gas	0.052	0.052	2.53	2428	2.96	4000	
Pb	208	1	No Gas	0.533	0.533	2.17	31245	1.37	4000	
U	238	1	No Gas	0.029	0.029	0.45	2401	0.58	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	1132624	1.18	1433109	79.03	60	120	
Sc-45 (IS)	45	1	No Gas	3532010	1.14	3556904	99.30	60	120	
Ge (IS)	72	1	No Gas	688794	0.70	752081	91.59	60	120	
Ge (IS)	74	1	No Gas	939791	0.36	1052835	89.26	60	120	
In-115 (IS)	115	1	No Gas	4373197	0.89	4864923	89.89	60	120	
Tb-159 (IS)	159	1	No Gas	6461977	0.79	6996909	92.35	60	120	

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **JUNE 3, 2013**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / 1,4-DIOXANE**
INORGANIC DATA VALIDATION – TOTAL METALS
LOCKHEED MRC
SAMPLE DELIVERY GROUP (SDG) 240-23844-1

SAMPLES: 6 / Aqueous / VOC

MRC-MW-93D-043013	MRC-MW-94D-043013	MRC-MW100A-043013
MRC-MW100B-043013	MRC-OF07-043013	TB-043013

5 / Aqueous / SVOC – 1,4-Dioxane

MRC-MW-93D-043013	MRC-MW-94D-043013	MRC-MW100A-043013
MRC-MW100B-043013	MRC-OF07-043013	

3 / Aqueous / Total Metals

MRC-MW-93D-043013	MRC-MW-94D-043013	MRC-MW100B-043013

Overview

The sample set for Lockheed MRC, SDG 240-23844-1, consisted of six (6) aqueous samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Five (5) aqueous samples were analyzed for the semi-volatile organic compound (SVOC) 1,4-dioxane as listed above. Three (3) aqueous samples were analyzed for total metals as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on April 30, 2013 and analyzed by TestAmerica Laboratories, Inc., North Canton and Irvine for the analyses. All analyses were conducted in accordance with EPA SW-846 Methods 8260B for VOCs, 8270D for SVOCs, 6020 for metals, and 7470A for mercury, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank/preparation results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, ICP serial dilution results, ICP interference results, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for tert-butyl alcohol and acetone on instrument A3UX11 on 05/07/13. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and acetone were also less than the 0.05 criteria for instrument A3UX11 on 05/14/13 @ 10:01.
  Affected Sample: MRC-MW100A-043013
  Action: The sample non-detected results for tert-butyl alcohol and acetone were qualified rejected, (UR).

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for tert-butyl alcohol on instrument A3UX16 on 02/07/13. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were less than the 0.05 criteria for instrument A3UX16 on 05/09/13 @ 12:35.

  Affected Samples:

MRC-MW-93D-043013	MRC-MW-94D-043013
MRC-OF07-043013	TB-043013

  Action: The affected sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR). The positive tert-butyl alcohol result for sample TB-043013 was qualified estimated, (J).

- The VOC initial calibration average relative response factors (RRF) were less than the 0.05 criteria for tert-butyl alcohol on instrument A3UX17 on 05/07/13. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were less than the 0.05 criteria for instrument A3UX17 on 05/13/13 @ 10:30.

  Affected Sample: MRC-MW100B-043013

  Action: The affected sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR).

- Samples had positive VOC tentatively identified compound (TICs) results attributable to analytical column bleed.

Sample	TIC Column Bleed Related Analytes
MRC-OF07-043013	trimethyl silanol
TB-043013	trimethyl silanol

  Actions: Sample positive trimethyl silanol results were qualified rejected, (R), due to being associated with analytical column bleed.

Minor Problems

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- The VOC continuing calibration verification (CCV) percent differences (%Ds) were greater than the 20% and greater than the 50% quality control limit for naphthalene and 1,2,3-trichlorobenzene for instrument A3UX11 on 05/14/13 @ 10:01.

  Affected Sample: MRC-MW100A-043013

  Action: The non-detected naphthalene and 1,2,3-trichlorobenzene sample results were qualified estimated, (UJ).

- The VOC CCV %Ds were greater than the 20% and greater than the 50% quality control limit for dichlorodifluoromethane, bromomethane, trichlorofluoromethane, and 1,1,2-trichlorotrifluoroethane for instrument A3UX16 on 05/09/13 @ 12:35.

  Affected Samples:

MRC-MW-93D-043013	MRC-MW-94D-043013
MRC-OF07-043013	TB-043013

  Action: The non-detected dichlorodifluoromethane, bromomethane, trichlorofluoromethane, and 1,1,2-trichlorotrifluoroethane sample results were qualified estimated, (UJ).

- The VOC CCV %Ds were greater than the 20% and less than the 50% quality control limit for tert-butyl alcohol and hexachlorobutadiene for instrument A3UX16 on 05/09/13 @ 12:35.

  Affected Samples:

  MRC-MW-93D-043013 MRC-MW-94D-043013
  MRC-OF07-043013 TB-043013

  Action: The sample TB-043013 positive tert-butyl alcohol and hexachlorobutadiene results were qualified estimated, (J). The remaining samples had non-detected results for the aforementioned analytes which were not qualified.

- The VOC laboratory control sample (LCS) percent recovery (%R) was less than the quality control limit for 1,2,3-trichlorobenzene for LCS 240-85803/4.

  Affected Sample: MRC-MW100A-043013

  Action: The sample non-detected 1,2,3-trichlorobenzene result was qualified estimated, (J).

- The following laboratory VOC contaminants were detected in the method blank samples and trip blank sample at the following maximum concentrations affecting samples as listed.

Analytes	Maximum Conc. µg/L	Action Level µg/L
Benzene [1]	0.13	0.65
Hexachlorobutadiene [1]	0.78	3.90
Tert-butyl alcohol [1]	7.4	37.0
1,2,3-Trichlorobenzene [1]	0.38	1.90
1,2,4-Trichlorobenzene [1]	0.20	1.00
Benzene [2]	0.185	0.925
Methylene chloride [2]	1.00	10.00
Hexachlorobutadiene [3]	0.871	4.355
Methylene chloride [3]	0.501	5.010
Naphthalene [3]	1.02	5.10
n-Butyl benzene [3]	0.162	0.810
1,2,3-Trichlorobenzene [3]	1.32	6.60
1,2,4-Trichlorobenzene [3]	0.851	4.255
Methylene chloride [4]	1.24	12.40

  [1] Trip blank sample TB-043013 affecting all samples.
  [2] Method blank MB 240-85318/6 affecting samples MRC-MW-93D-043013, MRC-MW-94D-043013, MRC-OF07-043013, and TB-043013.
  [3] Method blank MB 240-85645/5 affecting sample MRC-MW100B-043013.
  [4] Method blank MB 240-85803/5 affecting sample MRC-MW100A-043013.

  An action level of ten times the maximum level for methylene chloride and five times the maximum level for the other contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample analyte results less than the analyte action level were qualified (B) for blank contamination. The trip blank sample results were not qualified for blank contamination. Positive sample results for benzene were qualified for blank contamination.

- Sample MRC-OF07-043013 had a positive VOC tentatively identified compound (TIC) result listed as an unknown analyte.

  Action: The sample positive VOC TIC results was qualified as estimated, (NJ), presumptively present.

- The contract required detection limit (CRDL) %Rs were less than the 90% (and >50%) quality control limit for selenium for CRI 440-103278/8.

  Affected Samples:
  MRC-MW-93D-043013 MRC-MW-94D-043013 MRC-MW100B-043013
  Actions: The samples had non-detected selenium results which were qualified biased non-detected low, (UL).

- The following metal contaminants were detected in the blank samples at the following maximum concentration:

Analyte	Maximum Conc. µg/L	Action Level µg/L
Antimony [1]	0.310	1.550
Cobalt [1]	0.168	0.840
Silver [1]	0.129	0.645

[1] Maximum concentrations found in initial calibration blank sample (ICB) ICB 440-103278/7, continuing calibration blank (CCB) CCB 440-103278/30, and CCB 440-103278/40 affecting samples MRC-MW-93D-043013, MRC-MW-94D-043013, and MRC-MW100B-043013.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when evaluating for blank contamination. Sample analyte results less than the action level were qualified (B) for blank contamination. The sample MRC-MW-93D-043013 positive antimony result was qualified for blank contamination.

Notes

Sample MRC-MW100B-043013 was analyzed diluted 10X for VOCs resulting in elevated concentrations for non-detected VOC analytes.

The VOC CCV %Ds were greater than the 20% and less than the 50% quality control limit for dichlorodifluoromethane, tert-butyl alcohol, and 2,2-dichloropropane for instrument A3UX11 on 05/14/13 @ 10:01.

Affected Sample: MRC-MW100A-043013
Action: The tert-butyl alcohol non-detected result was rejected for RRF criteria non-compliances and no further action was necessary. The remaining sample aforementioned analyte results were non-detected and were not qualified.

The VOC CCV %Ds were greater than the 20% and less than the 50% quality control limit for acetone, methyl tert butyl ether, vinyl acetate, 2-butanone, 2,2-dichloropropane, 2-chloroethyl vinyl ether, 4-methyl-2-pentanone, trans-1,3-dichloropropene, tetrachloroethene, 2-hexanone, 1,1,2,2-tetrachloroethane, 1,2,3-trichloropropane, 1,2-dibromo-3-chloropropane, naphthalene, ethyl-t-butyl ether, and tert-amyl-methyl ether for instrument A3UX16 on 05/09/13 @ 12:35 and @ 12:58.

Affected Samples:
MRC-MW-93D-043013 MRC-MW-94D-043013
MRC-OF07-043013 TB-043013
Action: The samples had non-detected results for the aforementioned analytes which were not qualified.

The VOC CCV %Ds were greater than the 20% and less than the 50% quality control limit for trichlorofluoromethane, acetone, tert-butyl alcohol, vinyl acetate, 2-butanone, 4-methyl-2-pentanone, 2-hexanone, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene for instrument A3UX17 on 05/13/13 @ 10:30.

Affected Samples: MRC-MW100B-043013

Action: The sample tert-butyl alcohol and vinyl acetate non-detected results were rejected for RRF criteria non-compliances and no further action was necessary. The sample had non-detected results for the remaining aforementioned analytes which were not qualified.

The LCS %Rs were greater than the quality control limit for tetrachloroethene, trichloroethene, trichlorofluoromethane, and 1,1,2-trichlorotrifluoroethane for LCS 240-85318/4.

Affected Samples:

MRC-MW-93D-043013 MRC-MW-94D-043013
MRC-OF07-043013 TB-043013

Action: The sample tetrachloroethene, trichloroethene, trichlorofluoromethane, and 1,1,2-trichlorotrifluoroethane results were non-detected and were not qualified.

The VOC matrix spike (MS) and MS duplicate (MSD) %Rs for a number of VOC analytes and the relative percent difference (RPD) for the results for naphthalene were non-compliant for spiked samples from other SDGs (240-23944-H-4 and 240-23884-E-12). No validation action was necessary as the spiked samples were not from this SDG.

The SVOC surrogate %R was less than the quality control limit for the base/neutral surrogate terphenyl-d14 for sample MRC-MW-19A-040513

Affected Sample: MRC-MW-93D-043013

Actions: No validation action was necessary for a SVOC single surrogate non-compliance.

The CRDL %Rs were greater than the 110% quality control limit for chromium and nickel for CRI 440-103278/8. The CRDL %Rs were greater than the 110% quality control limit for barium, chromium, nickel, and zinc for CRI 440-103278/9.

Affected Samples:

MRC-MW-93D-043013 MRC-MW-94D-043013 MRC-MW100B-043013

Actions: The sample MRC-MW-94D-043013 positive zinc result was qualified estimated for a conflicting qualifier and no further action was necessary. No validation action was taken for positive results >2X the CRQL. No validation action was taken for the non-detected analyte results.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol, vinyl acetate, and acetone non-detected sample results were rejected due to initial calibration average RRF and CCV RRF criteria non-compliances. A sample positive tert-butyl alcohol result was qualified for RRF criteria non-compliances. Sample VOC and metal results were qualified blank contamination. Sample VOC results were qualified for CCV %D and LCS %R non-compliances. Sample metal analyte results were qualified for CRDL %R non-compliances.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). Sample positive VOC trimethyl silanol results attributed to column bleed were rejected. A sample positive VOC TIC unknown analyte result was qualified as presumptively present.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260B, 8270D, 6020, 7470A, the Region III EPA Functional Guidelines for Organic Data Validation (9/94), and the Region III EPA Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses (April 1993).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW100A-043013			MRC-MW100B-043013			MRC-MW-93D-043013			MRC-MW-94D-043013		
SDG: 240-23844-1	LAB_ID	240-23844-2			240-23844-3			240-23844-6			240-23844-5		
FRACTION: OV	SAMP_DATE	4/30/2013			4/30/2013			4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		2.3	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		2.2	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		1.8	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		2.8	U		0.28	UJ	C	0.28	UJ	C
1,1-DICHLOROETHANE		1.2			24			0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.49	J	P	79			0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		1.3	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	UJ	CE	1.7	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		4.3	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		1.5	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		1.2	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		6.7	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		2.4	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		1.3	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		2.2	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		1.8	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		1.4	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		1.6	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		1.3	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		1.3	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		5.7	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		9.9	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		1.1	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		4.1	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		1.8	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		1.2	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		3.2	U		0.32	U		0.32	U	
ACETONE		1.1	UR	C	11	U		1.1	U		1.1	U	
BENZENE		0.13	U		1.3	U		0.19	B	A	0.13	U	
BROMOBENZENE		0.13	U		1.3	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		2.9	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		1.5	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		6.4	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		4.1	U		0.41	UJ	C	0.41	UJ	C

PROJ_NO: 04795	NSAMPLE	MRC-OF07-043013			TB-043013		
SDG: 240-23844-1	LAB_ID	240-23844-4			240-23844-1		
FRACTION: OV	SAMP_DATE	4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	UJ	C	0.28	UJ	C
1,1-DICHLOROETHANE		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.38	J	P
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.2	J	P
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U	
BENZENE		0.2	B	A	0.13	J	P
BROMOBENZENE		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U	
BROMOMETHANE		0.41	UJ	C	0.41	UJ	C

PROJ_NO: 04795	NSAMPLE	MRC-MW100A-043013			MRC-MW100B-043013			MRC-MW-93D-043013			MRC-MW-94D-043013		
SDG: 240-23844-1	LAB_ID	240-23844-2			240-23844-3			240-23844-6			240-23844-5		
FRACTION: OV	SAMP_DATE	4/30/2013			4/30/2013			4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		1.3	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		1.3	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		1.5	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		1.8	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		2.9	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		1.6	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.52	J	P	41			0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		1.4	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		2.8	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		3.1	U		0.31	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		1.5	U		15	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		1.1	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		1.7	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		1.3	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		2.4	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		1.7	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		8.4	J	P	0.33	U		0.33	U	
NAPHTHALENE		0.24	UJ	C	2.4	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		1.2	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		1.4	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		1.4	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		1.3	U		0.13	U		0.13	U	
SILANOL, TRIMETHYL-													
STYRENE		0.11	U		1.1	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.67	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		1.3	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	39	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		2.9	U		0.29	U		0.29	U	
TOLUENE		0.13	U		1.3	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		2.8	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		1.9	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		1.9	U		0.19	U		0.19	U	
TRICHLOROETHENE		3			230			0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF07-043013			TB-043013		
SDG: 240-23844-1	LAB_ID	240-23844-4			240-23844-1		
FRACTION: OV	SAMP_DATE	4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	UJ	C	0.31	UJ	C
DIISOPROPYL ETHER		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.78	J	CP
ISOPROPYLBENZENE		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
SILANOL, TRIMETHYL-		1.4	R	Z2	2.4	R	Z2
STYRENE		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	7.4	J	CP
TETRACHLOROETHENE		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW100A-043013			MRC-MW100B-043013			MRC-MW-93D-043013			MRC-MW-94D-043013		
SDG: 240-23844-1	LAB_ID	240-23844-2			240-23844-3			240-23844-6			240-23844-5		
FRACTION: OV	SAMP_DATE	4/30/2013			4/30/2013			4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		2.1	U		0.21	UJ	C	0.21	UJ	C
UNKNOWN													
VINYL ACETATE		0.19	U		1.9	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		2.2	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF07-043013			TB-043013		
SDG: 240-23844-1	LAB_ID	240-23844-4			240-23844-1		
FRACTION: OV	SAMP_DATE	4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	UJ	C
UNKNOWN		1.5	NJ	Z!			
VINYL ACETATE		0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW100A-043013			MRC-MW100B-043013			MRC-MW-93D-043013			MRC-MW-94D-043013		
SDG: 240-23844-1	LAB_ID	240-23844-2			240-23844-3			240-23844-6			240-23844-5		
FRACTION: OS	SAMP_DATE	4/30/2013			4/30/2013			4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		1.3			45			0.49	U		0.53	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF07-043013		
SDG: 240-23844-1	LAB_ID	240-23844-4		
FRACTION: OS	SAMP_DATE	4/30/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW100B-043013			MRC-MW-93D-043013			MRC-MW-94D-043013		
SDG: 240-23844-1	LAB_ID	240-23844-3			240-23844-6			240-23844-5		
FRACTION: M	SAMP_DATE	4/30/2013			4/30/2013			4/30/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.3	U		1.1	B	A	0.3	U	
ARSENIC		0.9	U		1	J	P	0.9	U	
BARIUM		84			83			13		
BERYLLIUM		0.75	J	P	0.13	J	P	0.1	U	
CADMIUM		0.1	U		0.1	U		0.1	U	
CHROMIUM		0.9	U		6.2			0.9	U	
COBALT		70			2			0.97	J	P
COPPER		0.92	J	P	9.5			9.1		
LEAD		0.39	J	P	8			0.2	U	
MERCURY		0.1	U		0.1	U		0.1	U	
MOLYBDENUM		0.2	U		0.97	J	P	0.2	U	
NICKEL		120			8.4			4.9		
SELENIUM		0.5	UL	C	0.5	UL	C	0.5	UL	C
SILVER		0.1	U		0.1	U		0.1	U	
THALLIUM		0.2	U		0.2	U		0.2	U	
VANADIUM		0.96	J	P	8.9	J	P	0.8	U	
ZINC		180			640			6	J	P

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-93D-043013 Lab Sample ID: 240-23844-6

Matrix: Water Lab File ID: UXM7881.D

Analysis Method: 8260B Date Collected: 04/30/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.19	J B	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-93D-043013 Lab Sample ID: 240-23844-6

Matrix: Water Lab File ID: UXM7881.D

Analysis Method: 8260B Date Collected: 04/30/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U *	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U *	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-93D-043013 Lab Sample ID: 240-23844-6

Matrix: Water Lab File ID: UXM7881.D

Analysis Method: 8260B Date Collected: 04/30/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	67		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		63-129
2037-26-5	Toluene-d8 (Surr)	77		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-93D-043013 Lab Sample ID: 240-23844-6

Matrix: Water Lab File ID: UXM7881.D

Analysis Method: 8260B Date Collected: 04/30/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 17:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-94D-043013 Lab Sample ID: 240-23844-5

Matrix: Water Lab File ID: UXM7880.D

Analysis Method: 8260B Date Collected: 04/30/2013 11:31

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 16:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-94D-043013 Lab Sample ID: 240-23844-5

Matrix: Water Lab File ID: UXM7880.D

Analysis Method: 8260B Date Collected: 04/30/2013 11:31

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 16:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U *	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U *	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-94D-043013 | Lab Sample ID: 240-23844-5

Matrix: Water | Lab File ID: UXM7880.D

Analysis Method: 8260B | Date Collected: 04/30/2013 11:31

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 16:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85318 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	67		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		63-129
2037-26-5	Toluene-d8 (Surr)	75		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-94D-043013 Lab Sample ID: 240-23844-5

Matrix: Water Lab File ID: UXM7880.D

Analysis Method: 8260B Date Collected: 04/30/2013 11:31

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 16:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100A-043013 | Lab Sample ID: 240-23844-2

Matrix: Water | Lab File ID: UXJ1565.D

Analysis Method: 8260B | Date Collected: 04/30/2013 10:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 12:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85803 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	0.52	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.2		1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	0.49	J	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100A-043013 | Lab Sample ID: 240-23844-2

Matrix: Water | Lab File ID: UXJ1565.D

Analysis Method: 8260B | Date Collected: 04/30/2013 10:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 12:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85803 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U *	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	3.0		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100A-043013 Lab Sample ID: 240-23844-2

Matrix: Water Lab File ID: UXJ1565.D

Analysis Method: 8260B Date Collected: 04/30/2013 10:45

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 12:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85803 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	86		63-129
2037-26-5	Toluene-d8 (Surr)	95		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100A-043013 Lab Sample ID: 240-23844-2

Matrix: Water Lab File ID: UXJ1565.D

Analysis Method: 8260B Date Collected: 04/30/2013 10:45

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 12:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85803 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 | Lab Sample ID: 240-23844-3

Matrix: Water | Lab File ID: UXR4340.D

Analysis Method: 8260B | Date Collected: 04/30/2013 11:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 12:49

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85645 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	50	U	50	11
71-43-2	Benzene	10	U	10	1.3
108-86-1	Bromobenzene	10	U	10	1.3
74-97-5	Bromochloromethane	10	U	10	2.9
75-27-4	Bromodichloromethane	10	U	10	1.5
75-25-2	Bromoform	10	U	10	6.4
74-83-9	Bromomethane	10	U	10	4.1
78-93-3	2-Butanone	50	U	50	5.7
75-15-0	Carbon disulfide	10	U	10	1.3
56-23-5	Carbon tetrachloride	10	U	10	1.3
108-90-7	Chlorobenzene	10	U	10	1.5
75-00-3	Chloroethane	10	U	10	2.9
110-75-8	2-Chloroethyl vinyl ether	100	U	100	9.9
67-66-3	Chloroform	10	U	10	1.6
74-87-3	Chloromethane	10	U	10	3.0
95-49-8	2-Chlorotoluene	10	U	10	1.1
106-43-4	4-Chlorotoluene	10	U	10	1.8
156-59-2	cis-1,2-Dichloroethene	41		10	1.7
10061-01-5	cis-1,3-Dichloropropene	10	U	10	1.4
124-48-1	Dibromochloromethane	10	U	10	1.8
96-12-8	1,2-Dibromo-3-Chloropropane	50	U	50	6.7
106-93-4	1,2-Dibromoethane	10	U	10	2.4
74-95-3	Dibromomethane	10	U	10	2.8
95-50-1	1,2-Dichlorobenzene	10	U	10	1.3
541-73-1	1,3-Dichlorobenzene	10	U	10	1.4
106-46-7	1,4-Dichlorobenzene	10	U	10	1.3
75-71-8	Dichlorodifluoromethane	10	U	10	3.1
75-34-3	1,1-Dichloroethane	24		10	1.5
107-06-2	1,2-Dichloroethane	10	U	10	2.2
75-35-4	1,1-Dichloroethene	79		10	1.9
78-87-5	1,2-Dichloropropane	10	U	10	1.8
142-28-9	1,3-Dichloropropane	10	U	10	1.6
594-20-7	2,2-Dichloropropane	10	U	10	1.3
563-58-6	1,1-Dichloropropene	10	U	10	1.3
108-20-3	Diisopropyl ether	50	U	50	15
100-41-4	Ethylbenzene	10	U	10	1.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 Lab Sample ID: 240-23844-3

Matrix: Water Lab File ID: UXR4340.D

Analysis Method: 8260B Date Collected: 04/30/2013 11:50

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 12:49

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85645 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	50	U	50	1.1
87-68-3	Hexachlorobutadiene	10	U	10	3.0
591-78-6	2-Hexanone	50	U	50	4.1
98-82-8	Isopropylbenzene	10	U	10	1.3
75-09-2	Methylene Chloride	8.4	J B	10	3.3
108-10-1	4-Methyl-2-pentanone	50	U	50	3.2
1634-04-4	Methyl tert-butyl ether	10	U	10	1.7
179601-23-1	m-Xylene & p-Xylene	20	U	20	2.4
91-20-3	Naphthalene	10	U	10	2.4
104-51-8	n-Butylbenzene	10	U	10	1.2
103-65-1	n-Propylbenzene	10	U	10	1.4
95-47-6	o-Xylene	10	U	10	1.4
99-87-6	p-Isopropyltoluene	10	U	10	1.2
135-98-8	sec-Butylbenzene	10	U	10	1.3
100-42-5	Styrene	10	U	10	1.1
994-05-8	Tert-amyl-methyl ether (TAME)	50	U	50	0.67
75-65-0	tert-Butyl alcohol	200	U	200	39
98-06-6	tert-Butylbenzene	10	U	10	1.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	2.3
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	1.8
127-18-4	Tetrachloroethene	10	U	10	2.9
108-88-3	Toluene	10	U	10	1.3
156-60-5	trans-1,2-Dichloroethene	10	U	10	1.9
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.9
87-61-6	1,2,3-Trichlorobenzene	10	U	10	1.7
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.5
71-55-6	1,1,1-Trichloroethane	10	U	10	2.2
79-01-6	Trichloroethene	230		10	1.7
75-69-4	Trichlorofluoromethane	10	U	10	2.1
96-18-4	1,2,3-Trichloropropane	10	U	10	4.3
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	10	U	10	2.8
526-73-8	1,2,3-Trimethylbenzene	50	U	50	0.059
95-63-6	1,2,4-Trimethylbenzene	10	U	10	1.2
108-05-4	Vinyl acetate	20	U	20	1.9
75-01-4	Vinyl chloride	10	U	10	2.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 Lab Sample ID: 240-23844-3

Matrix: Water Lab File ID: UXR4340.D

Analysis Method: 8260B Date Collected: 04/30/2013 11:50

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 12:49

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85645 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	20	U	20	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	92		66-117
1868-53-7	Dibromofluoromethane (Surr)	96		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 Lab Sample ID: 240-23844-3

Matrix: Water Lab File ID: UXR4340.D

Analysis Method: 8260B Date Collected: 04/30/2013 11:50

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 12:49

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85645 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-OF07-043013 Lab Sample ID: 240-23844-4

Matrix: Water Lab File ID: UXM7879.D

Analysis Method: 8260B Date Collected: 04/30/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 16:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.20	J B	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-OF07-043013 Lab Sample ID: 240-23844-4

Matrix: Water Lab File ID: UXM7879.D

Analysis Method: 8260B Date Collected: 04/30/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 16:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U *	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U *	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-OF07-043013 Lab Sample ID: 240-23844-4

Matrix: Water Lab File ID: UXM7879.D

Analysis Method: 8260B Date Collected: 04/30/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 16:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		63-129
2037-26-5	Toluene-d8 (Surr)	78		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-OF07-043013 | Lab Sample ID: 240-23844-4

Matrix: Water | Lab File ID: UXM7879.D

Analysis Method: 8260B | Date Collected: 04/30/2013 13:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 16:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85318 | Units: ug/L

Number TICs Found: 2 | TIC Result Total: 2.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Unknown	2.12	1.5	T J
1066-40-6	Silanol, trimethyl-	4.61	1.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: TB-043013 Lab Sample ID: 240-23844-1

Matrix: Water Lab File ID: UXM7876.D

Analysis Method: 8260B Date Collected: 04/30/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 15:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	69		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	76		63-129
2037-26-5	Toluene-d8 (Surr)	77		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: TB-043013 Lab Sample ID: 240-23844-1

Matrix: Water Lab File ID: UXM7876.D

Analysis Method: 8260B Date Collected: 04/30/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 15:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.61	2.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: TB-043013 | Lab Sample ID: 240-23844-1

Matrix: Water | Lab File ID: UXM7876.D

Analysis Method: 8260B | Date Collected: 04/30/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 15:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85318 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.13	J B	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

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Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: TB-043013 Lab Sample ID: 240-23844-1

Matrix: Water Lab File ID: UXM7876.D

Analysis Method: 8260B Date Collected: 04/30/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 15:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	0.78	J	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	7.4	J	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U *	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	0.38	J	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	0.20	J	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U *	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U *	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U *	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-93D-043013 | Lab Sample ID: 240-23844-6

Matrix: Water | Lab File ID: 30509025.D

Analysis Method: 8270D | Date Collected: 04/30/2013 15:20

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 1000(mL) | Date Analyzed: 05/09/2013 18:40

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85347 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	29		20-110
367-12-4	2-Fluorophenol (Surr)	18		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	36		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	29		21-110
4165-62-2	Phenol-d5 (Surr)	28		21-110
1718-51-0	Terphenyl-d14 (Surr)	19	X	24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW-94D-043013 | Lab Sample ID: 240-23844-5

Matrix: Water | Lab File ID: 30521034.D

Analysis Method: 8270D | Date Collected: 04/30/2013 11:31

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 930(mL) | Date Analyzed: 05/21/2013 13:21

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 86786 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.1	U	1.1	0.53

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	57		20-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	58		21-110
4165-62-2	Phenol-d5 (Surr)	63		21-110
1718-51-0	Terphenyl-d14 (Surr)	45		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100A-043013 | Lab Sample ID: 240-23844-2

Matrix: Water | Lab File ID: 30508026.D

Analysis Method: 8270D | Date Collected: 04/30/2013 10:45

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2013 20:26

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85124 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.3		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	76		20-110
367-12-4	2-Fluorophenol (Surr)	78		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	96		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	76		21-110
4165-62-2	Phenol-d5 (Surr)	81		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 | Lab Sample ID: 240-23844-3

Matrix: Water | Lab File ID: 30508027.D

Analysis Method: 8270D | Date Collected: 04/30/2013 11:50

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2013 20:53

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85124 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	45		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	47		20-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	70		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	46		21-110
4165-62-2	Phenol-d5 (Surr)	51		21-110
1718-51-0	Terphenyl-d14 (Surr)	45		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-OF07-043013 | Lab Sample ID: 240-23844-4

Matrix: Water | Lab File ID: 30508028.D

Analysis Method: 8270D | Date Collected: 04/30/2013 13:50

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 1040(mL) | Date Analyzed: 05/08/2013 21:19

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85124 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.96	U	0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		20-110
367-12-4	2-Fluorophenol (Surr)	65		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	78		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	68		21-110
1718-51-0	Terphenyl-d14 (Surr)	48		24-110

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-93D-043013 Lab Sample ID: 240-23844-6

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2013 15:20

Reporting Basis: WET Date Received: 05/01/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	1.1	2.0	0.30	ug/L	J		1	6020
7440-38-2	Arsenic	1.0	5.0	0.90	ug/L	J		1	6020
7440-41-7	Beryllium	0.13	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	83	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	6.2	2.0	0.90	ug/L			1	6020
7440-50-8	Copper	9.5	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	8.4	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	8.0	1.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	2.0	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	640	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	0.97	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	8.9	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-94D-043013 Lab Sample ID: 240-23844-5

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2013 11:31

Reporting Basis: WET Date Received: 05/01/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	1.0	1.0	0.10	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	13	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	9.1	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	4.9	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	0.97	1.0	0.10	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	6.0	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW100B-043013 Lab Sample ID: 240-23844-3

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2013 11:50

Reporting Basis: WET Date Received: 05/01/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.75	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.10	ug/L	U		1	6020
7440-39-3	Barium	84	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	0.92	2.0	0.50	ug/L	J		1	6020
7440-02-0	Nickel	120	2.0	0.50	ug/L			1	6020
7439-92-1	Lead	0.39	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	70	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	180	20	4.0	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	0.96	20	0.80	ug/L	J		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-93D-043013 Lab Sample ID: 240-23844-6

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2013 15:20

Reporting Basis: WET Date Received: 05/01/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-94D-043013 Lab Sample ID: 240-23844-5

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2013 11:31

Reporting Basis: WET Date Received: 05/01/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW100B-043013 Lab Sample ID: 240-23844-3

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2013 11:50

Reporting Basis: WET Date Received: 05/01/2013 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

APPENDIX C

SUPPORT DOCUMENTATION

HOLD TIME

SDG 240-23812-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/16/2013	5/16/2013	15	0	15
HG	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
HG	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
HG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/3/2013	5/6/2013	4	3	7
HG	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
M	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/9/2013	5/9/2013	8	0	8
M	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/2/2013	2	1	3
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/6/2013	2	5	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
ALK	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
CL	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
DOC	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
NH3	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
NTA	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
NTI	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
OPO4	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
PCL	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/8/2013	5/9/2013	9	1	10
PCS	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
SO4	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
OS	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/3/2013	5/8/2013	4	5	9
OS	UG/L	MRC-OF08A-050113	240-23909-1	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF07-043013	240-23844-4	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MRC-OF-06C-050113	240-23909-7	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-06B-050113	240-23909-6	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08B-050113	240-23909-3	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF04B-050713	240-24312-1	NM	5/9/2013	5/16/2013	5/18/2013	7	2	9
OS	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/6/2013	5/21/2013	6	15	21
OS	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/6/2013	5/9/2013	6	3	9
OS	UG/L	MRC-OF08C-050113	240-23909-4	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08D-050113	240-23909-5	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/3/2013	5/8/2013	4	5	9
OS	UG/L	MRC-MW-111A-042913	240-23812-6	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-MW100A-043013	240-23844-2	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-OF-06A-050113	240-23909-8	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OV	UG/L	MRC-OF-06C-050113	240-23909-7	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-111A-042913	240-23812-6	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/13/2013	5/13/2013	13	0	13
OV	UG/L	MRC-MW100A-043013	240-23844-2	NM	4/30/2013	5/14/2013	5/14/2013	14	0	14
OV	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9
OV	UG/L	MRC-OF-06B-050113	240-23909-6	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF07-043013	240-23844-4	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9
OV	UG/L	MRC-OF08A-050113	240-23909-1	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF08B-050113	240-23909-3	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF08C-050113	240-23909-4	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF08D-050113	240-23909-5	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	TB-042913	240-23812-1	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	TB-043013	240-23844-1	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9

SORT	UNITS -	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	TB-050113	240-23909-2	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF-06A-050113	240-23909-8	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
ETHA	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
ETHE	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
METH	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
OVG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
OVG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3

Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client: Tetra Tech	Project Manager: Tony Aparavage	Date: 4/30/13	Chain of Custody Number: 114464
Address: 20251 Century Blvd Ste 200	Telephone Number (Area Code)/Fax Number: (301)528-5551	Lab Number:	Page 1 of 1
City: Germantown / State: MD / Zip Code: 20874	Site Contact: Stu Cameron	Lab Contact: Pat O'Meara	
Project Name and Location (State): 2013 MRC GW Sampling MD	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: 112IC04795			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: VOCs	1,4-Dioxane	Total Metals	Special Instructions/ Conditions of Receipt
TB-043013	—	—		X						2			X			
MRC-MW100A-043013	4/30/13	1045		X			2			3			X	X		
MRC-MW100B-043013		1150		X			2		1	3			X	X	X	
MRC-OF07-043013		1350		X			2			3			X	X		
mrc-mw-94D-043013		1131		X			2		1	3			X	X	X	
mrc-mw-93D-043013		1520		X			2		1	3			X	X	X	

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240-23844 Chain of Custody

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/30/13	1606	1. Received By	4/30/13	1607
2. Relinquished By	4/30/13	1640	2. Received By	5-1-13	900
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 23844
Canton Facility

Client TetraTech Site Name _____ Cooler unpacked by:

Cooler Received on 5-1-13 Opened on 5-1-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF –0 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C		
IR GUN# 4G	(CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	☐ See Multiple Cooler Form	
IR GUN# 5G	(CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C		
IR GUN# 8	(CF +1 °C) Observed Cooler Temp. 3.2 °C	Corrected Cooler Temp. 4.2 °C		

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	Yes	(No)
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# HC379740
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: Derek V. Deen

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) 1240 0507 were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW100B-043013	240-23844-D-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW-94D-043013	240-23844-D-5	Plastic 500ml - with Nitric Acid	<2	_____	_____
MRC-MW-93D-043013	240-23844-D-6	Plastic 500ml - with Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23844-1

Login Number: 23844
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 05/02/13 12:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
B	Compound was found in the blank and sample.
F	MS or MSD exceeds the control limits
F	RPD of the MS and MSD exceeds the control limits

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: 2013 MRC GW SAMPLING MD

Report Number: 240-23844-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and the 7470A Mercury analyses were performed at the TestAmerica Irvine laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 05/01/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 4.2 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-043013 (240-23844-1), MRC-MW100A-043013 (240-23844-2), MRC-MW100B-043013 (240-23844-3), MRC-OF07-043013 (240-23844-4), MRC-MW-94D-043013 (240-23844-5) and MRC-MW-93D-043013 (240-23844-6) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/09/2013, 05/13/2013 and 05/14/2013.

Methylene Chloride was detected in method blank MB 240-85318/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Benzene was detected in method blank MB 240-85318/6 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene and Naphthalene were detected in method blank MB 240-85645/5 at levels exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-85645/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Methylene Chloride was detected in method blank MB 240-85803/5 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Sample MRC-MW100B-043013 (240-23844-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The laboratory control sample (LCS) for batch 85318 recovered outside control limits for the following analytes: Tetrachloroethene and Trichloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The laboratory control sample (LCS) for batch 85318 recovered outside control limits for the following analyte(s): 1,1,2-Trichloro-1,2,2-trifluoroethane and Trichlorofluoromethane–has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

There was an MS/MSD analyzed in batch 85318 but could not be reported because the associated sample needed reanalyzed in a different batch.

The laboratory control sample (LCS) for batch 85803 recovered outside control limits for the following analyte(s): 1,2,3-Trichlorobenzene. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

The method blank for preparation batch 85645 contained 1,2,3-trichlorobenzene and naphthalene above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-MW100A-043013 (240-23844-2), MRC-MW100B-043013 (240-23844-3), MRC-OF07-043013 (240-23844-4), MRC-MW-94D-043013 (240-23844-5) and MRC-MW-93D-043013 (240-23844-6) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 05/06/2013 and analyzed on 05/08/2013, 05/09/2013 and 05/21/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MRC-MW-93D-043013 (240-23844-6).

The following sample(s) contained one acid and/or one base surrogate outside acceptance limits: MRC-MW-93D-043013 (240-23844-6). The laboratory's SOP allows one acid surrogate and/or one base surrogate to be outside acceptance limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MRC-MW100B-043013 (240-23844-3), MRC-MW-94D-043013 (240-23844-5) and MRC-MW-93D-043013 (240-23844-6) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared and analyzed on 05/08/2013.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MRC-MW100B-043013 (240-23844-3), MRC-MW-94D-043013 (240-23844-5) and MRC-MW-93D-043013 (240-23844-6) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 05/16/2013.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: 2013 MRC GW SAMPLING MD

TestAmerica Job ID: 240-23844-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: Tetra Tech, Inc
Project/Site: 2013 MRC GW SAMPLING MD

TestAmerica Job ID: 240-23844-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-23844-1	TB-043013	Water	04/30/13 00:00	05/01/13 09:00
240-23844-2	MRC-MW100A-043013	Water	04/30/13 10:45	05/01/13 09:00
240-23844-3	MRC-MW100B-043013	Water	04/30/13 11:50	05/01/13 09:00
240-23844-4	MRC-OF07-043013	Water	04/30/13 13:50	05/01/13 09:00
240-23844-5	MRC-MW-94D-043013	Water	04/30/13 11:31	05/01/13 09:00
240-23844-6	MRC-MW-93D-043013	Water	04/30/13 15:20	05/01/13 09:00

Detection Limit Exceptions Summary

Client: Tetra Tech, Inc
Project/Site: 2013 MRC GW SAMPLING MD

TestAmerica Job ID: 240-23844-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Matrix	Analyte	Units	Client RL	Lab PQL
8260B	Water	2-Butanone	ug/L	5.0	10
8260B	Water	2-Hexanone	ug/L	5.0	10
8260B	Water	4-Methyl-2-pentanone	ug/L	5.0	10
8260B	Water	Acetone	ug/L	5.0	10
8260B	Water	Diisopropyl ether	ug/L	5.0	10
8260B	Water	tert-Butyl alcohol	ug/L	20	50

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB116C.D BFB Injection Date: 05/07/2013

Instrument ID: A3UX11 BFB Injection Time: 10:37

Analysis Batch No.: 84966

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	43.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	85.8	
175	5.0 - 9.0 % of mass 174	6.5	(7.5)1
176	95.0 - 101.0 % of mass 174	83.2	(97.0)1
177	5.0 - 9.0 % of mass 176	5.4	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-84966/2	UXJ1361.D	05/07/2013	11:08
	STD8260 240-84966/3	UXJ1362.D	05/07/2013	11:31
	STD8260 240-84966/4	UXJ1363.D	05/07/2013	11:53
	STD8260 240-84966/5	UXJ1364.D	05/07/2013	12:16
	STD8260 240-84966/6	UXJ1365.D	05/07/2013	12:39
	STD8260 240-84966/7	UXJ1366.D	05/07/2013	13:02
	STD6 240-84966/8	UXJ1367.D	05/07/2013	13:24
	STD5 240-84966/9	UXJ1368.D	05/07/2013	13:47
	STD4 240-84966/10	UXJ1369.D	05/07/2013	14:09
	STD3 240-84966/11	UXJ1370.D	05/07/2013	14:32
	STD2 240-84966/12	UXJ1371.D	05/07/2013	14:55
	STD1 240-84966/13	UXJ1372.D	05/07/2013	15:18

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-84966/7	UXJ1366.D
Level 2	STD8260 240-84966/6	UXJ1365.D
Level 3	STD8260 240-84966/5	UXJ1364.D
Level 4	STD8260 240-84966/4	UXJ1363.D
Level 5	STD8260 240-84966/3	UXJ1362.D
Level 6	STD8260 240-84966/2	UXJ1361.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1594 0.1602	0.1382	0.1559	0.1537	0.1575	Ave		0.1541				5.3		15.0			
Chloromethane	0.2084 0.1901	0.1850	0.2035	0.1951	0.1989	Ave		0.1968			0.1000	4.4		15.0			
Vinyl chloride	0.1998 0.1726	0.1747	0.1770	0.1846	0.1782	Ave		0.1812				5.5		15.0			
Bromomethane	0.0701 0.0811	0.0651	0.0745	0.0786	0.0793	Ave		0.0748				8.3		15.0			
Chloroethane	0.0841 0.0945	0.0773	0.0871	0.0914	0.0920	Ave		0.0878				7.2		15.0			
Trichlorofluoromethane	0.1798 0.2000	0.1574	0.1753	0.1796	0.1988	Ave		0.1818				8.7		15.0			
~~Acrolein~~	0.0279 0.0329	0.0281	0.0289	0.0298	0.0320	Ave		~~0.0300~~				7.0		15.0			
1,1-Dichloroethene	0.2134 ~~0.1944~~	0.2010	0.1964	0.2093	0.2109	Ave		0.2042				3.9		15.0			
Acetone AVG 0.04885	0.0757 0.0416	0.0530	0.0428	0.0381	0.0419	Lin1	0.0578	0.0398							0.9960		0.9900
1,1,2-Trichloro-1,2,2-trichfluoroethane	~~0.0776~~ 0.1162	0.0881	0.0971	0.1008	0.1108	Ave		0.0984				14.0		15.0			
Iodomethane	0.3085 0.2333	0.2934	0.2759	0.2766	0.2610	Ave		0.2748				9.5		15.0			
Carbon disulfide	0.5679 0.5301	0.5621	0.5547	0.5565	0.5696	Ave		0.5568				2.6		15.0			
~~Acetonitrile~~	0.0110 0.0106	0.0085	0.0089	0.0103	0.0099	Ave		~~0.0099~~				10.0		15.0			
Methyl acetate	0.1466 0.1378	0.1468	0.1438	0.1345	0.1419	Ave		0.1419				3.5		15.0			
Methylene Chloride	0.4091 0.2347	0.3351	0.2678	0.2619	0.2445	Lin1	0.1891	0.2331							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0081 0.0080	0.0062	0.0070	0.0074	0.0086	Ave		0.0075				12.0		15.0			
Acrylonitrile	0.0710 0.0732	0.0656	0.0681	0.0651	0.0724	Ave		0.0692				5.0		15.0			
trans-1,2-Dichloroethene	0.3547 0.3309	0.3417	0.3402	0.3473	0.3398	Ave		0.3424				2.3		15.0			
Methyl tert-butyl ether	0.7064 0.7026	0.6872	0.6976	0.6815	0.7294	Ave		0.7008				2.4		15.0			
Hexane	0.0578 0.0693	0.0648	0.0554	0.0622	0.0652	Ave		0.0625				8.2		15.0			
1,1-Dichloroethane	0.5417 0.5102	0.5279	0.5289	0.5417	0.5349	Ave		0.5309			0.1000	2.2		15.0			
Vinyl acetate	0.0464 0.0630	0.0502	0.0632	0.0618	0.0652	Ave		0.0583				14.0		15.0			
cis-1,2-Dichloroethene	0.3444 0.3515	0.3369	0.3527	0.3561	0.3567	Ave		0.3497				2.2		15.0			
2-Butanone	0.0766 0.0682	0.0703	0.0670	0.0642	0.0734	Ave		0.0699				6.4		15.0			
2,2-Dichloropropane	0.2813 0.2229	0.2664	0.2506	0.2527	0.2487	Ave		0.2538				7.7		15.0			
Bromochloromethane	0.1727 0.1665	0.1705	0.1698	0.1762	0.1693	Ave		0.1708				1.9		15.0			
Tetrahydrofuran	0.0433 0.0462	0.0454	0.0457	0.0427	0.0487	Ave		0.0453				4.7		15.0			
Chloroform	0.5802 0.5137	0.5328	0.5221	0.5324	0.5277	Ave		0.5348				4.4		15.0			
1,1,1-Trichloroethane	0.3414 0.3292	0.3788	0.3628	0.3707	0.3751	Ave		0.3597				5.6		15.0			
Cyclohexane	0.2947 0.3499	0.3345	0.3206	0.3524	0.3596	Ave		0.3353				7.3		15.0			
1,1-Dichloropropene	0.4105 0.4122	0.4054	0.4051	0.4307	0.4201	Ave		0.4140				2.4		15.0			
Carbon tetrachloride	0.3227 0.3117	0.3226	0.3234	0.3348	0.3379	Ave		0.3255				2.9		15.0			
1,2-Dichloroethane	0.3466 0.3333	0.3489	0.3388	0.3453	0.3503	Ave		0.3439				1.9		15.0			
Benzene	1.3663 1.3032	1.3137	1.3101	1.3380	1.3319	Ave		1.3272				1.8		15.0			
Trichloroethene	0.3613 0.3346	0.3495	0.3356	0.3442	0.3503	Ave		0.3459				2.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3209 0.3941	0.3586	0.3555	0.3742	0.3821	Ave		0.3642				7.0		15.0			
1,2-Dichloropropane	0.3115 0.2872	0.2878	0.2983	0.2959	0.2965	Ave		0.2962				3.0		15.0			
Dibromomethane	0.1538 0.1566	0.1554	0.1624	0.1591	0.1672	Ave		0.1591				3.1		15.0			
~~1,4-Dioxane~~	0.0003 0.0010	0.0006	0.0005	0.0009	0.0011	Qua	-0.088	~~0.0012~~	0						0.9950		0.9900
Bromodichloromethane	0.3746 0.3652	0.3424	0.3555	0.3716	0.3782	Ave		0.3646				3.7		15.0			
2-Chloroethyl vinyl ether	0.1418 0.1511	0.1451	0.1495	0.1509	0.1586	Ave		0.1495				3.9		15.0			
cis-1,3-Dichloropropene	0.4421 0.4530	0.3992	0.4302	0.4529	0.4664	Ave		0.4406				5.4		15.0			
4-Methyl-2-pentanone	0.1248 0.1377	0.1501	0.1445	0.1392	0.1492	Ave		0.1409				6.6		15.0			
Toluene	2.3527 2.3846	2.2832	2.2039	2.3199	2.3763	Ave		2.3201				2.9		15.0			
trans-1,3-Dichloropropene	0.5628 0.6519	0.5152	0.5832	0.6114	0.6425	Ave		0.5945				8.7		15.0			
Ethyl methacrylate	0.5059 0.5423	0.4635	0.4659	0.5103	0.5586	Ave		0.5077				7.6		15.0			
1,1,2-Trichloroethane	0.4308 0.3800	0.3729	0.3908	0.3744	0.3876	Ave		0.3894				5.5		15.0			
1,3-Dichloropropane	0.6847 0.6793	0.6632	0.6831	0.6615	0.7060	Ave		0.6796				2.4		15.0			
Tetrachloroethene	0.4364 0.4124	0.3930	0.4045	0.4251	0.4178	Ave		0.4149				3.7		15.0			
2-Hexanone	0.1245 0.1367	0.1252	0.1327	0.1336	0.1451	Ave		0.1330				5.8		15.0			
Dibromochloromethane	0.3751 0.4113	0.3616	0.3714	0.3891	0.4155	Ave		0.3873				5.7		15.0			
1,2-Dibromoethane	0.3574 0.3461	0.3364	0.3500	0.3368	0.3641	Ave		0.3484				3.2		15.0			
Chlorobenzene	1.2018 1.1290	1.1570	1.1160	1.1577	1.1616	Ave		1.1539			0.3000	2.6		15.0			
1,1,1,2-Tetrachloroethane	0.3714 0.3729	0.3983	0.3665	0.3841	0.3897	Ave		0.3805				3.2		15.0			
Ethylbenzene	0.6063 0.5970	0.5723	0.6055	0.6078	0.6221	Ave		0.6018				2.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.7095 0.6962	0.6637	0.7011	0.7196	0.7145	Ave		0.7008				2.9		15.0			
o-Xylene	0.5717 0.5696	0.5580	0.5798	0.6022	0.5956	Ave		0.5795				2.9		15.0			
Styrene	0.8873 0.9777	0.8906	0.9138	1.0014	0.9946	Ave		0.9442				5.6		15.0			
Bromoform	0.1540 0.1592	0.1371	0.1517	0.1455	0.1624	Ave		0.1517			0.1000	6.1		15.0			
Isopropylbenzene	1.2008 1.1945	1.2329	1.2417	1.2516	1.2545	Ave		1.2293				2.1		15.0			
1,1,2,2-Tetrachloroethane	0.8210 0.6824	0.7953	0.7750	0.7286	0.7553	Ave		0.7596			0.3000	6.5		15.0			
Bromobenzene	0.9775 0.9126	0.9925	0.9681	0.9698	0.9573	Ave		0.9629				2.8		15.0			
1,2,3-Trichloropropane	0.2273 0.2187	0.2627	0.2438	0.2307	0.2327	Ave		0.2360				6.5		15.0			
trans-1,4-Dichloro-2-butene	0.1251 0.1602	0.0998	0.1146	0.1231	0.1469	Lin1	-0.080	0.1533							0.9900		0.9900
n-Propylbenzene	0.8717 0.8621	0.9261	0.9105	0.8937	0.8835	Ave		0.8913				2.7		15.0			
2-Chlorotoluene	0.7445 0.7911	0.8189	0.8574	0.8029	0.8252	Ave		0.8067				4.7		15.0			
1,3,5-Trimethylbenzene	2.2090 2.4156	2.3590	2.3941	2.4473	2.4416	Ave		2.3778				3.7		15.0			
4-Chlorotoluene	0.8727 0.8653	0.8480	0.8323	0.8504	0.8523	Ave		0.8535				1.7		15.0			
tert-Butylbenzene	1.9177 1.9040	1.9276	1.9642	2.0063	1.9720	Ave		1.9486				2.0		15.0			
1,2,4-Trimethylbenzene	2.0676 2.5147	2.3612	2.4648	2.4931	2.5213	Ave		2.4038				7.3		15.0			
sec-Butylbenzene	2.5956 2.6889	2.6429	2.6989	2.7630	2.6956	Ave		2.6808				2.1		15.0			
1,3-Dichlorobenzene	1.6779 1.5722	1.7106	1.6595	1.5951	1.5965	Ave		1.6353				3.4		15.0			
p-Isopropyltoluene	2.0328 2.3657	2.1283	2.2254	2.3675	2.3779	Ave		2.2496				6.5		15.0			
1,4-Dichlorobenzene	1.8517 1.6012	1.6914	1.7081	1.6602	1.6539	Ave		1.6944				5.0		15.0			
n-Butylbenzene	1.9209 2.0336	1.8826	1.9205	1.9816	2.0254	Ave		1.9607				3.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.6836 1.4030	1.5884	1.6015	1.5413	1.5206	Ave		1.5564				6.0		15.0			
1,2-Dibromo-3-Chloropropane	0.1128 0.0908	0.1357	0.1313	0.1164	0.1219	Ave		0.1181				14.0		15.0			
1,3,5-Trichlorobenzene	1.1052 0.7377	0.9154	1.0056	0.8781	0.8666	Ave		0.9181				14.0		15.0			
1,2,4-Trichlorobenzene	0.9492 0.5449	0.8060	0.7680	0.7215	0.6898	Qua	0.0034	0.8134	-0.007						1.0000		0.9900
Hexachlorobutadiene	0.4030 0.2205	0.3998	0.3727	0.3439	0.2850	Qua	0.1310	0.3514	-0.003						0.9990		0.9900
Naphthalene	1.9695 0.9187	1.9413	1.8223	1.6812	1.5463	Qua	-0.506	2.1299	-0.030						0.9980		0.9900
1,2,3-Trichlorobenzene	0.7440 0.3425	0.8069	0.7154	0.6312	0.5615	Qua	0.0096	0.7620	-0.010						0.9990		0.9900
Dibromofluoromethane (Surr)	0.3045 0.2775	0.2562	0.3032	0.2901	0.2781	Ave		0.2849				6.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3130 0.2726	0.2793	0.3123	0.2975	0.2759	Ave		0.2918				6.3		15.0			
Toluene-d8 (Surr)	1.9011 1.9630	1.7705	1.9081	1.9229	1.9086	Ave		1.8957				3.4		15.0			
4-Bromofluorobenzene (Surr)	0.3320 0.3286	0.3113	0.3348	0.3324	0.3316	Ave		0.3284				2.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-23844-1 | Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 | Calibration End Date: 05/07/2013 15:18 | Calibration ID: 15043

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84966/13	UXJ1372.D
Level 2	STD2 240-84966/12	UXJ1371.D
Level 3	STD3 240-84966/11	UXJ1370.D
Level 4	STD4 240-84966/10	UXJ1369.D
Level 5	STD5 240-84966/9	UXJ1368.D
Level 6	STD6 240-84966/8	UXJ1367.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.2557 0.2421	0.2640	0.2436	0.2356	0.2527	Ave		0.2489				4.2		15.0			
Ethyl ether	0.2294 0.2336	0.2232	0.2405	0.2202	0.2323	Ave		0.2299				3.2		15.0			
3-Chloro-1-propene	0.1274 0.1699	0.1362	0.1536	0.1503	0.1672	Ave		0.1508				11.0		15.0			
Diisopropyl ether	0.2584 0.2886	0.2793	0.2775	0.2562	0.2878	Ave		0.2747				5.2		15.0			
2-Chloro-1,3-butadiene	0.3879 0.4311	0.4213	0.4144	0.4215	0.4360	Ave		0.4187				4.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.7067 0.7677	0.7770	0.7592	0.6807	0.7541	Ave		0.7409				5.2		15.0			
~~Propionitrile~~	0.0136 0.0182	0.0216	0.0151	0.0175	0.0170	Lin1	-0.004	~~0.0178~~							0.9950		0.9900
Ethyl acetate	0.1859 0.1658	0.1958	0.1667	0.1702	0.1583	Ave		0.1738				8.1		15.0			
Methacrylonitrile	0.1094 0.1081	0.1182	0.1115	0.1131	0.1094	Ave		0.1116				3.3		15.0			
~~Isobutyl alcohol~~	0.0045 0.0034	0.0051	0.0032	0.0039	0.0039	Qua	-0.020	~~0.0044~~	0						0.9980		0.9900
Tert-amyl-methyl ether (TAME)	0.6654 0.7215	0.6927	0.6904	0.6212	0.6894	Ave		0.6801				5.0		15.0			
n-Heptane	0.0524 0.0607	0.0477	0.0574	0.0816	0.0618	Qua	-0.022	0.0728	0						0.9930		0.9900
~~n-Butanol~~	0.0036 0.0036	0.0039	0.0034	0.0036	0.0031	Ave		~~0.0035~~				8.0		15.0			
Methyl methacrylate	0.1436 0.1616	0.1494	0.1536	0.1493	0.1580	Ave		0.1526				4.3		15.0			
~~2-Nitropropane~~	0.0371 0.0358	0.0403	0.0321	0.0343	0.0331	Ave		~~0.0355~~				8.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0661 0.0747	0.0849	0.0713	0.0708	0.0722	Ave		0.0733				8.6		15.0			
1,2,3-Trimethylbenzene	2.3146 2.7560	2.3139	2.2741	2.3695	2.6939	Ave		2.4537				8.7		15.0			
2-Methylnaphthalene	0.9245 0.2001	1.0409	0.7310	0.5723	0.4750	Qua	0.8511	0.6950	-0.006						0.9940		0.9900
n-Butyl acetate	0.1905 0.2249	0.1995	0.1965	0.2017	0.2071	Ave		0.2034				5.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB123.D BFB Injection Date: 05/14/2013

Instrument ID: A3UX11 BFB Injection Time: 09:35

Analysis Batch No.: 85803

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	44.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	83.8	
175	5.0 - 9.0 % of mass 174	6.5	(7.8)1
176	95.0 - 101.0 % of mass 174	80.8	(96.4)1
177	5.0 - 9.0 % of mass 176	5.5	(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-85803/2	UXJ1559.D	05/14/2013	10:01
	CCV 240-85803/3	UXJ1560.D	05/14/2013	10:23
	LCS 240-85803/4	UXJ1561.D	05/14/2013	10:46
	MB 240-85803/5	UXJ1563.D	05/14/2013	11:30
MRC-MW100A-043013	240-23844-2	UXJ1565.D	05/14/2013	12:16
	240-23944-H-4 MS	UXJ1579.D	05/14/2013	17:34
	240-23944-E-4 MSD	UXJ1580.D	05/14/2013	17:57

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85803/2 Calibration Date: 05/14/2013 10:01

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1559.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1541	0.1919		1.00	0.0100	24.5	50.0
Chloromethane	Ave	0.1968	0.1771	0.1000	1.00	0.0100	-10.0	50.0
Vinyl chloride	Ave	0.1812	0.1851		1.00	0.0100	2.2	20.0
Bromomethane	Ave	0.0748	0.0749		1.00	0.0100	0.2	50.0
Chloroethane	Ave	0.0878	0.0904		1.00	0.0100	3.0	50.0
Trichlorofluoromethane	Ave	0.1818	0.1931		1.00	0.0100	6.2	50.0
~~Acrolein~~	Ave	0.0300	~~0.0320~~		20.0	0.100	6.9	50.0
1,1-Dichloroethene	Ave	0.2042	0.1778		1.00	0.0100	-13.0	20.0
Acetone	Linl		0.0464		10.0	0.0200	9.4	50.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.0984	0.1065		1.00	0.0100	8.2	50.0
~~Iodomethane~~	Ave	0.2748	0.1995		1.00	0.0100	~~-27.4~~	50.0
Carbon disulfide	Ave	0.5568	0.5121		1.00	0.0100	-8.0	50.0
~~Acetonitrile~~	Ave	0.0099	~~0.0136~~		20.0	0.100	~~37.2~~	50.0
Methyl acetate	Ave	0.1419	0.1443		10.0	0.0200	1.7	50.0
Methylene Chloride	Linl		0.2416		1.00	0.0100	-4.5	50.0
tert-Butyl alcohol	Ave	0.0075	0.0092		50.0	0.200	21.6	50.0
Acrylonitrile	Ave	0.0692	0.0760		20.0	0.0200	9.7	50.0
Methyl tert-butyl ether	Ave	0.7008	0.6325		1.00	0.0100	-9.7	50.0
trans-1,2-Dichloroethene	Ave	0.3424	0.3032		1.00	0.0100	-11.5	50.0
~~Hexane~~	Ave	0.0625	0.0757		1.00	0.0100	~~21.2~~*	20.0
1,1-Dichloroethane	Ave	0.5309	0.4807	0.1000	1.00	0.0100	-9.5	50.0
Vinyl acetate	Ave	0.0583	0.0586		2.00	0.0100	0.4	50.0
2-Butanone	Ave	0.0699	0.0734		10.0	0.0200	4.9	50.0
2,2-Dichloropropane	Ave	0.2538	0.1914		1.00	0.0100	-24.6	50.0
cis-1,2-Dichloroethene	Ave	0.3497	0.3126		1.00	0.0100	-10.6	50.0
Bromochloromethane	Ave	0.1708	0.1515		1.00	0.0100	-11.3	50.0
~~Tetrahydrofuran~~	Ave	0.0453	~~0.0461~~		5.00	0.0100	1.7	50.0
Chloroform	Ave	0.5348	0.4683		1.00	0.0100	-12.4	20.0
1,1,1-Trichloroethane	Ave	0.3597	0.2886		1.00	0.0100	-19.8	50.0
Cyclohexane	Ave	0.3353	0.3419		1.00	0.0100	2.0	50.0
1,1-Dichloropropene	Ave	0.4140	0.3835		1.00	0.0100	-7.4	50.0
Carbon tetrachloride	Ave	0.3255	0.2864		1.00	0.0100	-12.0	50.0
1,2-Dichloroethane	Ave	0.3439	0.3105		1.00	0.0100	-9.7	50.0
Benzene	Ave	1.327	1.155		1.00	0.0100	-13.0	50.0
Trichloroethene	Ave	0.3459	0.3082		1.00	0.0100	-10.9	50.0
Methylcyclohexane	Ave	0.3642	0.3779		1.00	0.0100	3.8	50.0
1,2-Dichloropropane	Ave	0.2962	0.2585		1.00	0.0100	-12.7	20.0
Dibromomethane	Ave	0.1591	0.1441		1.00	0.0100	-9.4	50.0
~~1,4-Dioxane~~	Qua		~~0.0010~~		50.0	0.500	3.1	50.0
Bromodichloromethane	Ave	0.3646	0.3330		1.00	0.0100	-8.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85803/2 Calibration Date: 05/14/2013 10:01

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1559.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1495	0.1396		10.0	0.0200	-6.6	50.0
cis-1,3-Dichloropropene	Ave	0.4406	0.4022		1.00	0.0100	-8.7	50.0
4-Methyl-2-pentanone	Ave	0.1409	0.1389		10.0	0.0200	-1.4	50.0
Toluene	Ave	2.320	2.119		1.00	0.0100	-8.7	20.0
trans-1,3-Dichloropropene	Ave	0.5945	0.5806		1.00	0.0100	-2.3	50.0
Ethyl methacrylate	Ave	0.5077	0.4763		1.00	0.0100	-6.2	50.0
1,1,2-Trichloroethane	Ave	0.3894	0.3547		1.00	0.0100	-8.9	50.0
1,3-Dichloropropane	Ave	0.6796	0.6280		1.00	0.0100	-7.6	50.0
Tetrachloroethene	Ave	0.4149	0.3906		1.00	0.0100	-5.9	50.0
2-Hexanone	Ave	0.1330	0.1374		10.0	0.0200	3.3	50.0
Dibromochloromethane	Ave	0.3873	0.3660		1.00	0.0100	-5.5	50.0
1,2-Dibromoethane	Ave	0.3484	0.3286		1.00	0.0100	-5.7	50.0
Chlorobenzene	Ave	1.154	1.021	0.3000	1.00	0.0100	-11.5	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3805	0.3500		1.00	0.0100	-8.0	50.0
Ethylbenzene	Ave	0.6018	0.5453		1.00	0.0100	-9.4	20.0
m-Xylene & p-Xylene	Ave	0.7008	0.6316		2.00	0.0200	-9.9	50.0
o-Xylene	Ave	0.5795	0.5052		1.00	0.0100	-12.8	50.0
Styrene	Ave	0.9442	0.8803		1.00	0.0100	-6.8	50.0
Bromoform	Ave	0.1517	0.1492	0.1000	1.00	0.0100	-1.6	50.0
Isopropylbenzene	Ave	1.229	1.101		1.00	0.0100	-10.5	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7596	0.7119	0.3000	1.00	0.0100	-6.3	50.0
Bromobenzene	Ave	0.9629	0.9196		1.00	0.0100	-4.5	50.0
1,2,3-Trichloropropane	Ave	0.2360	0.2242		1.00	0.0100	-5.0	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1650		1.00	0.0100	12.8	50.0
n-Propylbenzene	Ave	0.8913	0.9107		1.00	0.0100	2.2	50.0
2-Chlorotoluene	Ave	0.8067	0.7701		1.00	0.0100	-4.5	50.0
1,3,5-Trimethylbenzene	Ave	2.378	2.389		1.00	0.0100	0.5	50.0
4-Chlorotoluene	Ave	0.8535	0.8474		1.00	0.0100	-0.7	50.0
tert-Butylbenzene	Ave	1.949	1.919		1.00	0.0100	-1.5	50.0
1,2,4-Trimethylbenzene	Ave	2.404	2.444		1.00	0.0100	1.7	50.0
sec-Butylbenzene	Ave	2.681	2.738		1.00	0.0100	2.1	50.0
1,3-Dichlorobenzene	Ave	1.635	1.516		1.00	0.0100	-7.3	50.0
p-Isopropyltoluene	Ave	2.250	2.317		1.00	0.0100	3.0	50.0
1,4-Dichlorobenzene	Ave	1.694	1.614		1.00	0.0100	-4.8	50.0
n-Butylbenzene	Ave	1.961	1.935		1.00	0.0100	-1.3	50.0
1,2-Dichlorobenzene	Ave	1.556	1.384		1.00	0.0100	-11.1	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1181	0.1079		2.00	0.0100	-8.7	50.0
1,3,5-Trichlorobenzene	Ave	0.9181	0.7504		1.00	0.0100	-18.3	50.0
1,2,4-Trichlorobenzene	Qua		0.5021		1.00	0.0100	-34.8	50.0
Hexachlorobutadiene	Qua		0.2684		1.00	0.0100	-21.4	50.0
Naphthalene	Qua		0.8895		1.00	0.0100	-52.7*	50.0

FORM VII 8260B

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85803/2 Calibration Date: 05/14/2013 10:01

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1559.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Qua		0.3275		1.00	0.0100	-54.3*	50.0
Dibromofluoromethane (Surr)	Ave	0.2849	0.2548		0.00746	0.00834	-10.6	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2918	0.2480		0.00709	0.00834	-15.0	50.0
Toluene-d8 (Surr)	Ave	1.896	1.682		0.00740	0.00834	-11.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.3284	0.2905		0.00738	0.00834	-11.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCV 240-85803/3 Calibration Date: 05/14/2013 10:23

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 13:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 15:18

Lab File ID: UXJ1560.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.2489	0.2331		2.00	0.0100	-6.4	50.0
Ethyl ether	Ave	0.2299	0.1965		2.00	0.0100	-14.5	50.0
3-Chloro-1-propene	Ave	0.1508	0.1252		2.00	0.0100	-17.0	50.0
Diisopropyl ether	Ave	0.2747	0.2498		10.0	0.0500	-9.1	50.0
2-Chloro-1,3-butadiene	Ave	0.4187	0.3953		2.00	0.0100	-5.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7409	0.6882		5.00	0.0100	-7.1	50.0
Ethyl acetate	Ave	0.1738	0.1637		4.00	0.0200	-5.8	50.0
Propionitrile	Lin1		0.0198		4.00	0.0200	12.3	50.0
Methacrylonitrile	Ave	0.1116	0.1144		2.00	0.0100	2.4	50.0
Isobutyl alcohol	Qua		0.0063		50.0	0.200	-61.2*	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.6801	0.6287		5.00	0.0100	-7.6	50.0
n-Heptane	Qua		0.0670		1.00	0.0100	-1.0	50.0
n-Butanol	Ave	0.0035	0.0044		50.0	0.200	-24.3	50.0
Methyl methacrylate	Ave	0.1526	0.1517		2.00	0.0100	-0.6	50.0
2-Nitropropane	Ave	0.0355	0.0379		2.00	0.0200	7.0	50.0
Cyclohexanone	Ave	0.0733	0.0691		20.0	0.100	-5.8	50.0
1,2,3-Trimethylbenzene	Ave	2.454	2.267		0.00924	0.0100	-7.6	50.0
2-Methylnaphthalene	Qua		0.0855		5.00	0.0200	-93.0*	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB3402.D BFB Injection Date: 11/27/2012

Instrument ID: A3UX16 BFB Injection Time: 15:03

Analysis Batch No.: 66473

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.5	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.3)1
176	95.0 - 101.0 % of mass 174	71.2	(95.1)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-66473/8	UXM9089.D	11/27/2012	17:59
	STD2 240-66473/9	UXM9090.D	11/27/2012	18:22
	STD3 240-66473/10	UXM9091.D	11/27/2012	18:44
	STD4 240-66473/11	UXM9092.D	11/27/2012	19:07
	STD5 240-66473/12	UXM9093.D	11/27/2012	19:30
	STD6 240-66473/13	UXM9094.D	11/27/2012	19:53

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB297.D BFB Injection Date: 02/07/2013

Instrument ID: A3UX16 BFB Injection Time: 12:56

Analysis Batch No.: 74618

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.9	
75	30.0 - 60.0 % of mass 95	56.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	51.6	
175	5.0 - 9.0 % of mass 174	3.4	(6.5)1
176	95.0 - 101.0 % of mass 174	50.1	(97.1)1
177	5.0 - 9.0 % of mass 176	3.4	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-74618/2	UXM6218.D	02/07/2013	13:27
	STD8260 240-74618/3	UXM6219.D	02/07/2013	13:50
	STD8260 240-74618/4	UXM6220.D	02/07/2013	14:12
	STD8260 240-74618/5	UXM6221.D	02/07/2013	14:35
	STD8260 240-74618/6	UXM6222.D	02/07/2013	14:58
	STD8260 240-74618/7	UXM6223.D	02/07/2013	15:20
	ICV 240-74618/8	UXM6224.D	02/07/2013	15:43

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6395 0.5790	0.5949	0.6191	0.5701	0.5598	Ave		0.5937				5.1		15.0			
Ethyl ether	0.2957 0.2913	0.2805	0.3162	0.2908	0.2785	Ave		0.2922				4.6		15.0			
3-Chloro-1-propene	0.1657 0.1816	0.1589	0.1747	0.1684	0.1734	Ave		0.1704				4.6		15.0			
Diisopropyl ether	0.2885 0.3072	0.2714	0.3042	0.2883	0.2921	Ave		0.2920				4.4		15.0			
2-Chloro-1,3-butadiene	0.5541 0.6319	0.5394	0.6027	0.5733	0.5814	Ave		0.5805				5.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.9712 1.0865	0.9515	1.0602	1.0211	1.0411	Ave		1.0219				5.1		15.0			
~~Propionitrile~~	0.0336 0.0410	0.0390	0.0380	0.0379	0.0392	Ave		~~0.0361~~				6.4		15.0			
Ethyl acetate	0.2415 0.2708	0.2384	0.2467	0.2536	0.2545	Ave		0.2509				4.6		15.0			
Methacrylonitrile	0.2017 0.1992	0.1750	0.1941	0.1858	0.1896	Ave		0.1909				5.1		15.0			
~~Isobutyl alcohol~~	0.0071 0.0081	0.0070	0.0072	0.0075	0.0077	Ave		~~0.0074~~				5.5		15.0			
Tert-amyl-methyl ether (TAME)	0.7918 0.9098	0.8105	0.8835	0.8488	0.8716	Ave		0.8526				5.3		15.0			
n-Heptane	0.0550 0.0612	0.0566	0.0534	0.0500	0.0453	Ave		0.0536				10.0		15.0			
~~n-Butanol~~	0.0039 0.0055	0.0047	0.0054	0.0053	0.0055	Ave		~~0.0051~~				13.0		15.0			
Methyl methacrylate	0.2010 0.2422	0.1999	0.2231	0.2243	0.2270	Ave		0.2196				7.4		15.0			
~~2-Nitropropane~~	0.0355 +++++	0.0470	0.0403	0.0428	0.0485	Ave		~~0.0428~~				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0937 0.0872	0.0965	0.1030	0.0923	0.0852	Ave		0.0930				6.9		15.0			
1,2,3-Trimethylbenzene	2.4010 2.9673	2.3401	2.6960	2.6868	2.7750	Ave		2.6444				8.9		15.0			
2-Methylnaphthalene	0.8663 +++++	1.0537	1.0510	0.9969	0.7520	Ave		0.9440				14.0		15.0			
n-Butyl acetate	0.3213 0.3680	0.3124	0.3343	0.3499	0.3540	Ave		0.3400				6.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-74618/7	UXM6223.D
Level 2	STD8260 240-74618/6	UXM6222.D
Level 3	STD8260 240-74618/5	UXM6221.D
Level 4	STD8260 240-74618/4	UXM6220.D
Level 5	STD8260 240-74618/3	UXM6219.D
Level 6	STD8260 240-74618/2	UXM6218.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1655 0.2139	0.1950	0.2117	0.2250	0.1770	Ave		0.1980				12.0		15.0			
Chloromethane	0.5058 0.4534	0.4913	0.4685	0.4467	0.4652	Ave		0.4718			0.1000	4.8		15.0			
Vinyl chloride	0.4479 0.4349	0.4543	0.4578	0.4328	0.4507	Ave		0.4464				2.3		15.0			
Bromomethane	0.1647 0.1134	0.1618	0.1243	0.1362	0.1072	Lin1	0.0733	0.1117							0.9930		0.9900
Chloroethane	0.3008 0.2699	0.2633	0.2651	0.2622	0.2584	Ave		0.2699				5.8		15.0			
Trichlorofluoromethane	0.1945 0.1767	0.1777	0.1872	0.1834	0.1598	Ave		0.1799				6.6		15.0			
Acrolein	0.0621 0.0714	0.0629	0.0667	0.0657	0.0611	Ave		0.0650				5.9		15.0			
1,1-Dichloroethene	0.2925 0.3178	0.2976	0.2885	0.2944	0.2961	Ave		0.2978				3.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1277 0.1255	0.1102	0.1219	0.1299	0.1021	Ave		0.1196				9.2		15.0			
Acetone	0.1631 0.1304	0.1249	0.1382	0.1245	0.1110	Ave		0.1320				13.0		15.0			
Iodomethane	0.3203 0.3505	0.3484	0.3203	0.3182	0.3277	Ave		0.3309				4.5		15.0			
Carbon disulfide	0.9006 1.1662	0.9102	0.9141	0.9835	1.0269	Ave		0.9836				10.0		15.0			
~~Acetonitrile~~	0.0501 0.0501	0.0368	0.0476	0.0422	0.0348	Ave		~~0.0436~~				15.0		15.0			
Methyl acetate	0.3200 0.3183	0.3023	0.3159	0.3003	0.2851	Ave		0.3070				4.4		15.0			
Methylene Chloride	0.4848 0.3837	0.4381	0.3679	0.3537	0.3640	Ave		0.3987				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0199 0.0200	0.0154	0.0200	0.0182	0.0142	Ave		0.0180				14.0		15.0			
Acrylonitrile	0.1454 0.1558	0.1411	0.1518	0.1445	0.1383	Ave		0.1462				4.5		15.0			
Methyl tert-butyl ether	0.9103 1.0586	0.9378	0.9098	0.9208	0.9452	Ave		0.9471				6.0		15.0			
trans-1,2-Dichloroethene	0.3352 0.3614	0.3383	0.3201	0.3225	0.3390	Ave		0.3361				4.4		15.0			
Hexane	0.0729 0.0745	0.0604	0.0768	0.0775	0.0594	Ave		0.0703				12.0		15.0			
1,1-Dichloroethane	0.7047 0.7867	0.7510	0.6985	0.6925	0.7265	Ave		0.7266			0.1000	5.0		15.0			
Vinyl acetate	0.0486 0.0680	0.0460	0.0541	0.0579	0.0610	Ave		0.0560				15.0		15.0			
2-Butanone	0.1932 0.1741	0.1465	0.1768	0.1602	0.1554	Ave		0.1677				10.0		15.0			
cis-1,2-Dichloroethene	0.3362 0.3742	0.3651	0.3392	0.3299	0.3496	Ave		0.3490				5.0		15.0			
2,2-Dichloropropane	0.2813 0.3509	0.2981	0.2821	0.3032	0.3241	Ave		0.3066				8.7		15.0			
Bromochloromethane	0.1382 0.1411	0.1314	0.1248	0.1258	0.1302	Ave		0.1319				5.0		15.0			
Tetrahydrofuran	0.2003 0.1123	0.1251	0.1133	0.1091	0.0977	Lin1	0.0706	0.1042							0.9920		0.9900
Chloroform	0.5694 0.6344	0.6062	0.5689	0.5595	0.5889	Ave		0.5879				4.8		15.0			
1,1,1-Trichloroethane	0.3357 0.4198	0.3545	0.3585	0.3720	0.3793	Ave		0.3700				7.8		15.0			
Cyclohexane	0.6018 0.7292	0.5994	0.6741	0.7267	0.6358	Ave		0.6611				8.8		15.0			
1,1-Dichloropropene	0.4526 0.5465	0.4899	0.4801	0.4880	0.4937	Ave		0.4918				6.2		15.0			
Carbon tetrachloride	0.2047 0.2871	0.2145	0.2204	0.2455	0.2522	Ave		0.2374				13.0		15.0			
1,2-Dichloroethane	0.5136 0.5650	0.5326	0.4994	0.4893	0.5154	Ave		0.5192				5.2		15.0			
Benzene	1.5256 1.6847	1.5537	1.4382	1.4263	1.5081	Ave		1.5228				6.2		15.0			
Trichloroethene	0.2530 0.2800	0.2635	0.2536	0.2460	0.2572	Ave		0.2589				4.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4063 0.5136	0.3939	0.4873	0.5164	0.4219	Ave		0.4566				12.0		15.0			
1,2-Dichloropropane	0.3429 0.4213	0.3676	0.3520	0.3598	0.3788	Ave		0.3704				7.5		15.0			
Dibromomethane	0.1600 0.1800	0.1687	0.1666	0.1599	0.1642	Ave		0.1666				4.5		15.0			
1,4-Dioxane	0.0022 0.0021	0.0014	0.0024	0.0019	0.0018	Qua	0.0828	~~0.0015~~	0						0.9960		0.9900
Bromodichloromethane	0.2757 0.4230	0.3164	0.3178	0.3358	0.3740	Ave		0.3405				15.0		15.0			
2-Chloroethyl vinyl ether	0.1018 0.1952	0.1176	0.1452	0.1527	0.1656	Lin1	-0.250	0.1854							0.9920		0.9900
cis-1,3-Dichloropropene	0.3128 0.5541	0.3599	0.3850	0.4141	0.4734	Qua	-0.115	0.3937	0.0041						1.0000		0.9900
4-Methyl-2-pentanone	0.2461 0.3546	0.2660	0.3018	0.3036	0.3113	Ave		0.2972				13.0		15.0			
Toluene	2.0335 2.4081	2.1481	2.0452	2.0049	2.1647	Ave		2.1341				7.0		15.0			
trans-1,3-Dichloropropene	0.3834 0.6923	0.4261	0.4661	0.5171	0.5955	Qua	-0.207	0.5016	0.0049						1.0000		0.9900
Ethyl methacrylate	0.3855 0.6573	0.4366	0.5000	0.5368	0.5946	Lin1	-0.374	0.6353							0.9950		0.9900
1,1,2-Trichloroethane	0.3513 0.3794	0.3500	0.3495	0.3401	0.3596	Ave		0.3550				3.8		15.0			
1,3-Dichloropropane	0.7041 0.8219	0.7485	0.7309	0.7176	0.7566	Ave		0.7466				5.6		15.0			
Tetrachloroethene	0.2394 0.2779	0.2485	0.2456	0.2474	0.2555	Ave		0.2524				5.4		15.0			
2-Hexanone	0.2555 0.3273	0.2530	0.2844	0.2914	0.3021	Ave		0.2856				9.9		15.0			
Dibromochloromethane	0.1965 0.3239	0.2072	0.2257	0.2453	0.2777	Qua	-0.067	0.2326	0.0023						1.0000		0.9900
1,2-Dibromoethane	0.2819 0.3505	0.3047	0.3100	0.3178	0.3332	Ave		0.3163				7.5		15.0			
Chlorobenzene	1.0721 1.2059	1.1200	1.0795	1.0433	1.1272	Ave		1.1080			0.3000	5.2		15.0			
1,1,1,2-Tetrachloroethane	0.2433 0.3561	0.2660	0.2702	0.2948	0.3211	Ave		0.2919				14.0		15.0			
Ethylbenzene	0.5250 0.6926	0.5782	0.5894	0.5867	0.6324	Ave		0.6007				9.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6327 0.9012	0.7126	0.7222	0.7393	0.8059	Ave		0.7523				12.0		15.0			
o-Xylene	0.6506 0.8703	0.7179	0.7372	0.7408	0.8089	Ave		0.7543				10.0		15.0			
Styrene	0.9693 1.4883	1.0506	1.1070	1.1627	1.3150	Lin1	-0.754	1.4178							0.9920		0.9900
Bromoform	0.0819 0.1516	0.0895	0.0988	0.1100	0.1259	Qua	-0.031	0.1013	0.0013		0.1000				1.0000		0.9900
Isopropylbenzene	1.4947 2.1214	1.6455	1.7370	1.7894	1.9033	Ave		1.7819				12.0		15.0			
1,1,2,2-Tetrachloroethane	0.9920 1.0231	1.0892	1.0509	1.0781	1.0457	Ave		1.0465			0.3000	3.4		15.0			
Bromobenzene	0.6528 0.7862	0.7346	0.7241	0.7347	0.7560	Ave		0.7314				6.1		15.0			
1,2,3-Trichloropropane	0.2749 0.2747	0.2936	0.2771	0.2874	0.2758	Ave		0.2806				2.8		15.0			
trans-1,4-Dichloro-2-butene	0.2602 0.3393	0.2990	0.2853	0.3115	0.3150	Ave		0.3017				9.0		15.0			
n-Propylbenzene	0.6560 0.9449	0.7868	0.8024	0.8571	0.8933	Ave		0.8234				12.0		15.0			
2-Chlorotoluene	0.7071 0.8315	0.7838	0.7649	0.7981	0.8052	Ave		0.7818				5.5		15.0			
1,3,5-Trimethylbenzene	2.2287 3.2654	2.5753	2.7581	2.9169	3.0305	Ave		2.7958				13.0		15.0			
4-Chlorotoluene	0.7086 0.8957	0.8509	0.7967	0.8218	0.8621	Ave		0.8226				7.9		15.0			
tert-Butylbenzene	1.8732 2.6788	2.1545	2.3587	2.4660	2.5571	Ave		2.3480				12.0		15.0			
1,2,4-Trimethylbenzene	2.3218 3.3539	2.7540	2.9061	2.9666	3.1301	Ave		2.9054				12.0		15.0			
sec-Butylbenzene	2.3987 3.5071	2.7725	3.0430	3.1790	3.2957	Ave		3.0327				13.0		15.0			
1,3-Dichlorobenzene	1.3883 1.5034	1.4458	1.4409	1.3903	1.4513	Ave		1.4367				3.0		15.0			
p-Isopropyltoluene	1.8920 2.7941	2.0620	2.3493	2.4668	2.5988	Ave		2.3605				14.0		15.0			
1,4-Dichlorobenzene	1.4766 1.5820	1.5509	1.5101	1.4725	1.5285	Ave		1.5201				2.8		15.0			
n-Butylbenzene	1.9276 2.7241	2.0408	2.2530	2.3479	2.5383	Ave		2.3053				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 74618

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/07/2013 13:27 Calibration End Date: 02/07/2013 15:20 Calibration ID: 13620

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3922 1.4327	1.4047	1.3988	1.3238	1.4189	Ave		1.3952				2.7		15.0			
1,2-Dibromo-3-Chloropropane	0.0956 0.0865	0.0733	0.0919	0.0855	0.0925	Ave		0.0875				9.1		15.0			
1,3,5-Trichlorobenzene	0.7274 0.6156	0.6578	0.7250	0.6145	0.6672	Ave		0.6679				7.5		15.0			
1,2,4-Trichlorobenzene	0.6586 0.5021	0.5654	0.6525	0.5249	0.5808	Ave		0.5807				11.0		15.0			
Hexachlorobutadiene	0.2419 +++++	0.2174	0.2428	0.2049	0.2005	Ave		0.2215				9.0		15.0			
Naphthalene	1.8396 1.5435	1.5783	2.0618	1.7042	1.8696	Ave		1.7662				11.0		15.0			
1,2,3-Trichlorobenzene	0.5910 +++++	0.4794	0.6204	0.4598	0.4810	Ave		0.5263				14.0		15.0			
Dibromofluoromethane (Surr)	0.2318 0.2635	0.2444	0.2333	0.2312	0.2505	Ave		0.2425				5.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4018 0.4434	0.4134	0.4080	0.3932	0.4073	Ave		0.4112				4.2		15.0			
Toluene-d8 (Surr)	1.4581 1.8629	1.6195	1.6043	1.5883	1.7170	Ave		1.6417				8.3		15.0			
4-Bromofluorobenzene (Surr)	0.5145 0.6364	0.5417	0.5528	0.5472	0.5940	Ave		0.5645				7.7		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2922	0.3425		2.00	0.0100	17.2	50.0
Diisopropyl ether	Ave	0.2920	0.2760		10.0	0.0100	-5.5	50.0
Isobutyl alcohol	Ave	0.0074	0.0093		50.0	0.500	25.3	50.0
Cyclohexanone	Ave	0.0930	0.0304		20.0	0.200	-67.3*	50.0
1,2,3-Trimethylbenzene	Ave	2.644	2.994		0.0113	0.0100	13.2	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.2524		1.00	0.0100	27.4	50.0
Chloromethane	Ave	0.4718	0.4832	0.1000	1.00	0.0100	2.4	50.0
Vinyl chloride	Ave	0.4464	0.4783		1.00	0.0100	7.1	20.0
Bromomethane	Lin1		0.1130		1.00	0.0100	-5.4	50.0
Chloroethane	Ave	0.2699	0.2696		1.00	0.0100	-0.1	50.0
Trichlorofluoromethane	Ave	0.1799	0.2258		1.00	0.0100	25.5	50.0
Acrolein	Ave	0.0650	0.0737		20.0	0.0300	13.4	50.0
1,1-Dichloroethene	Ave	0.2978	0.2814		1.00	0.0100	-5.5	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1469		1.00	0.0100	22.9	50.0
Acetone	Ave	0.1320	0.1147		10.0	0.0200	-13.1	50.0
Iodomethane	Ave	0.3309	0.3093		1.00	0.0100	-6.5	50.0
Carbon disulfide	Ave	0.9836	0.8873		1.00	0.0100	-9.8	50.0
Acetonitrile	Ave	0.0436	0.0440		20.0	0.0300	1.1	50.0
Methyl acetate	Ave	0.3070	0.2874		10.0	0.0100	-6.4	50.0
Methylene Chloride	Ave	0.3987	0.3316		1.00	0.0100	-16.8	50.0
tert-Butyl alcohol	Ave	0.0180	0.0180		50.0	0.200	0.4	50.0
Acrylonitrile	Ave	0.1462	0.1386		20.0	0.0300	-5.1	50.0
Methyl tert-butyl ether	Ave	0.9471	0.8619		1.00	0.0100	-9.0	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3069		1.00	0.0100	-8.7	50.0
Hexane	Ave	0.0703	0.0802		1.00	0.0100	14.1	20.0
1,1-Dichloroethane	Ave	0.7266	0.6707	0.1000	1.00	0.0100	-7.7	50.0
Vinyl acetate	Ave	0.0560	0.0587		2.00	0.0100	4.8	50.0
2-Butanone	Ave	0.1677	0.1588		10.0	0.0200	-5.3	50.0
2,2-Dichloropropane	Ave	0.3066	0.2711		1.00	0.0100	-11.6	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3183		1.00	0.0100	-8.8	50.0
Bromochloromethane	Ave	0.1319	0.1204		1.00	0.0100	-8.7	50.0
Tetrahydrofuran	Lin1		0.1040		5.00	0.0100	-7.0	50.0
Chloroform	Ave	0.5879	0.5420		1.00	0.0100	-7.8	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3399		1.00	0.0100	-8.1	50.0
Cyclohexane	Ave	0.6611	0.6987		1.00	0.0100	5.7	50.0
1,1-Dichloropropene	Ave	0.4918	0.4846		1.00	0.0100	-1.5	50.0
Carbon tetrachloride	Ave	0.2374	0.2244		1.00	0.0100	-5.5	50.0
1,2-Dichloroethane	Ave	0.5192	0.4963		1.00	0.0100	-4.4	50.0
Benzene	Ave	1.523	1.401		1.00	0.0100	-8.0	50.0
Trichloroethene	Ave	0.2589	0.2498		1.00	0.0100	-3.5	50.0
1,2-Dichloropropane	Ave	0.3704	0.3538		1.00	0.0100	-4.5	20.0
Methylcyclohexane	Ave	0.4566	0.5013		1.00	0.0100	9.8	50.0
Dibromomethane	Ave	0.1666	0.1629		1.00	0.0100	-2.2	50.0
Bromodichloromethane	Ave	0.3405	0.3196		1.00	0.0100	-6.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.1380		10.0	0.0100	-12.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Qua		0.3718		1.00	0.0100	-10.9	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.2941		10.0	0.0200	-1.1	50.0
Toluene	Ave	2.134	1.974		1.00	0.0100	-7.5	20.0
trans-1,3-Dichloropropene	Qua		0.4752		1.00	0.0100	-9.2	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3402		1.00	0.0100	-4.2	50.0
1,3-Dichloropropane	Ave	0.7466	0.7102		1.00	0.0100	-4.9	50.0
Tetrachloroethene	Ave	0.2524	0.2492		1.00	0.0100	-1.3	50.0
2-Hexanone	Ave	0.2856	0.2769		10.0	0.0200	-3.1	50.0
Dibromochloromethane	Qua		0.2262		1.00	0.0100	-8.3	50.0
1,2-Dibromoethane	Ave	0.3163	0.2994		1.00	0.0100	-5.4	50.0
Chlorobenzene	Ave	1.108	1.043	0.3000	1.00	0.0100	-5.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.2752		1.00	0.0100	-5.7	50.0
Ethylbenzene	Ave	0.6007	0.5731		1.00	0.0100	-4.6	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.7296		2.00	0.0200	-3.0	50.0
o-Xylene	Ave	0.7543	0.7415		1.00	0.0100	-1.7	50.0
Styrene	Lin1		1.192		1.00	0.0100	-10.6	50.0
Bromoform	Qua		0.1002	0.1000	1.00	0.0100	-8.6	50.0
Isopropylbenzene	Ave	1.782	1.763		1.00	0.0100	-1.1	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.9414	0.3000	1.00	0.0100	-10.0	50.0
Bromobenzene	Ave	0.7314	0.6863		1.00	0.0100	-6.2	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.2663		1.00	0.0100	-5.1	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.2780		1.00	0.0200	-7.9	50.0
n-Propylbenzene	Ave	0.8234	0.8304		1.00	0.0100	0.8	50.0
2-Chlorotoluene	Ave	0.7818	0.7600		1.00	0.0100	-2.8	50.0
1,3,5-Trimethylbenzene	Ave	2.796	2.751		1.00	0.0100	-1.6	50.0
4-Chlorotoluene	Ave	0.8226	0.7820		1.00	0.0100	-4.9	50.0
tert-Butylbenzene	Ave	2.348	2.325		1.00	0.0100	-1.0	50.0
1,2,4-Trimethylbenzene	Ave	2.905	2.871		1.00	0.0100	-1.2	50.0
sec-Butylbenzene	Ave	3.033	3.010		1.00	0.0100	-0.8	50.0
1,3-Dichlorobenzene	Ave	1.437	1.335		1.00	0.0100	-7.1	50.0
p-Isopropyltoluene	Ave	2.361	2.460		1.00	0.0100	4.2	50.0
1,4-Dichlorobenzene	Ave	1.520	1.416		1.00	0.0100	-6.8	50.0
n-Butylbenzene	Ave	2.305	2.347		1.00	0.0100	1.8	50.0
1,2-Dichlorobenzene	Ave	1.395	1.318		1.00	0.0100	-5.6	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0884		2.00	0.0100	0.9	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.5692		1.00	0.0100	-2.0	50.0
Hexachlorobutadiene	Ave	0.2215	0.1995		1.00	0.0100	-9.9	50.0
Naphthalene	Ave	1.766	2.025		1.00	0.0100	14.7	50.0
1,2,3-Trichlorobenzene	Ave	0.5263	0.5412		1.00	0.0100	2.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2031		0.00855	0.0102	-16.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.3469		0.00861	0.0102	-15.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICV 240-74618/8 Calibration Date: 02/07/2013 15:43

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM6224.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.642	1.430		0.00889	0.0102	-12.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.5199		0.00940	0.0102	-7.9	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB3589.D BFB Injection Date: 05/09/2013

Instrument ID: A3UX16 BFB Injection Time: 12:08

Analysis Batch No.: 85318

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.9	
75	30.0 - 60.0 % of mass 95	47.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	71.8	
175	5.0 - 9.0 % of mass 174	5.1	(7.1)1
176	95.0 - 101.0 % of mass 174	68.3	(95.1)1
177	5.0 - 9.0 % of mass 176	4.3	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-85318/2	UXM7869.D	05/09/2013	12:35
	CCV 240-85318/3	UXM7870.D	05/09/2013	12:58
	LCS 240-85318/4	UXM7871.D	05/09/2013	13:21
	MB 240-85318/6	UXM7873.D	05/09/2013	14:06
TB-043013	240-23844-1	UXM7876.D	05/09/2013	15:15
MRC-OF07-043013	240-23844-4	UXM7879.D	05/09/2013	16:23
MRC-MW-94D-043013	240-23844-5	UXM7880.D	05/09/2013	16:45
MRC-MW-93D-043013	240-23844-6	UXM7881.D	05/09/2013	17:08

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85318/2 Calibration Date: 05/09/2013 12:35

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7869.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1980	0.3643		1.00	0.0100	84.0*	50.0
Chloromethane	Ave	0.4718	0.4318	0.1000	1.00	0.0100	-8.5	50.0
Vinyl chloride	Ave	0.4464	0.4028		1.00	0.0100	-9.8	20.0
Bromomethane	Lin1		0.1893		1.00	0.0100	63.0*	50.0
Chloroethane	Ave	0.2699	0.2236		1.00	0.0100	-17.2	50.0
Trichlorofluoromethane	Ave	0.1799	0.3836		1.00	0.0100	113.2*	50.0
~~Acrolein~~	Ave	0.0650	~~0.0414~~		20.0	0.100	~~-36.3~~	50.0
1,1-Dichloroethene	Ave	0.2978	0.3122		1.00	0.0100	4.8	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1196	0.1891		1.00	0.0100	58.1*	50.0
Acetone	Ave	0.1320	0.0971		10.0	0.0200	-26.4	50.0
~~Iodomethane~~	Ave	0.3309	0.4200		1.00	0.0100	~~26.9~~	50.0
Carbon disulfide	Ave	0.9836	0.9682		1.00	0.0100	-1.6	50.0
~~Acetonitrile~~	Ave	0.0436	~~0.0351~~		20.0	0.100	-19.6	50.0
~~Methyl acetate~~	Ave	0.3070	0.1969		10.0	0.0200	~~35.9~~	50.0
Methylene Chloride	Ave	0.3987	0.4130		1.00	0.0100	3.6	50.0
tert-Butyl alcohol	Ave	0.0180	~~0.0113~~		50.0	0.200	-37.3	50.0
~~Acrylonitrile~~	Ave	0.1462	0.1039		20.0	0.0200	~~28.9~~	50.0
Methyl tert-butyl ether	Ave	0.9471	0.6570		1.00	0.0100	-30.6	50.0
trans-1,2-Dichloroethene	Ave	0.3361	0.3513		1.00	0.0100	4.5	50.0
Hexane	Ave	0.0703	0.0637		1.00	0.0100	-9.4	20.0
1,1-Dichloroethane	Ave	0.7266	0.6336	0.1000	1.00	0.0100	-12.8	50.0
Vinyl acetate	Ave	0.0560	0.0424		2.00	0.0100	-24.1	50.0
2-Butanone	Ave	0.1677	0.1056		10.0	0.0200	-37.1	50.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3565		1.00	0.0100	2.1	50.0
2,2-Dichloropropane	Ave	0.3066	0.2029		1.00	0.0100	-33.8	50.0
Bromochloromethane	Ave	0.1319	0.1486		1.00	0.0100	12.7	50.0
~~Tetrahydrofuran~~	Lin1		0.0628		5.00	0.0100	~~46.5~~	50.0
Chloroform	Ave	0.5879	0.5600		1.00	0.0100	-4.7	20.0
1,1,1-Trichloroethane	Ave	0.3700	0.3347		1.00	0.0100	-9.5	50.0
Cyclohexane	Ave	0.6611	0.5333		1.00	0.0100	-19.3	50.0
1,1-Dichloropropene	Ave	0.4918	0.4628		1.00	0.0100	-5.9	50.0
Carbon tetrachloride	Ave	0.2374	0.2608		1.00	0.0100	9.8	50.0
1,2-Dichloroethane	Ave	0.5192	0.4166		1.00	0.0100	-19.8	50.0
Benzene	Ave	1.523	1.531		1.00	0.0100	0.5	50.0
Trichloroethene	Ave	0.2589	0.3079		1.00	0.0100	18.9	50.0
1,2-Dichloropropane	Ave	0.3704	0.3494		1.00	0.0100	-5.7	20.0
Methylcyclohexane	Ave	0.4566	0.4073		1.00	0.0100	-10.8	50.0
Dibromomethane	Ave	0.1666	0.1559		1.00	0.0100	-6.4	50.0
~~1,4-Dioxane~~	Qua		~~0.0021~~		50.0	0.500	14.8	50.0
Bromodichloromethane	Ave	0.3405	0.3448		1.00	0.0100	1.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85318/2 Calibration Date: 05/09/2013 12:35

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7869.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Linl		0.1252		10.0	0.0200	-25.7	50.0
cis-1,3-Dichloropropene	Qua		0.3952		1.00	0.0100	-5.9	50.0
4-Methyl-2-pentanone	Ave	0.2972	0.1878		10.0	0.0200	-36.8	50.0
Toluene	Ave	2.134	1.946		1.00	0.0100	-8.8	20.0
trans-1,3-Dichloropropene	Qua		0.3943		1.00	0.0100	-23.0	50.0
Ethyl methacrylate	Linl		0.3881		1.00	0.0100	-30.6	50.0
1,1,2-Trichloroethane	Ave	0.3550	0.3094		1.00	0.0100	-12.8	50.0
1,3-Dichloropropane	Ave	0.7466	0.6062		1.00	0.0100	-18.8	50.0
Tetrachloroethene	Ave	0.2524	0.3040		1.00	0.0100	20.5	50.0
2-Hexanone	Ave	0.2856	0.1674		10.0	0.0200	-41.4	50.0
Dibromochloromethane	Qua		0.2523		1.00	0.0100	1.1	50.0
1,2-Dibromoethane	Ave	0.3163	0.2779		1.00	0.0100	-12.1	50.0
Chlorobenzene	Ave	1.108	1.108	0.3000	1.00	0.0100	0.0	50.0
1,1,1,2-Tetrachloroethane	Ave	0.2919	0.3190		1.00	0.0100	9.3	50.0
Ethylbenzene	Ave	0.6007	0.5825		1.00	0.0100	-3.0	20.0
m-Xylene & p-Xylene	Ave	0.7523	0.7523		2.00	0.0200	0.0	50.0
o-Xylene	Ave	0.7543	0.7227		1.00	0.0100	-4.2	50.0
Styrene	Linl		1.197		1.00	0.0100	-10.3	50.0
Bromoform	Qua		0.1182	0.1000	1.00	0.0100	5.7	50.0
Isopropylbenzene	Ave	1.782	1.615		1.00	0.0100	-9.4	50.0
1,1,2,2-Tetrachloroethane	Ave	1.047	0.6889	0.3000	1.00	0.0100	-34.2	50.0
Bromobenzene	Ave	0.7314	0.7417		1.00	0.0100	1.4	50.0
1,2,3-Trichloropropane	Ave	0.2806	0.1974		1.00	0.0100	-29.7	50.0
trans-1,4-Dichloro-2-butene	Ave	0.3017	0.1531		1.00	0.0100	-49.3	50.0
n-Propylbenzene	Ave	0.8234	0.7654		1.00	0.0100	-7.0	50.0
2-Chlorotoluene	Ave	0.7818	0.7214		1.00	0.0100	-7.7	50.0
1,3,5-Trimethylbenzene	Ave	2.796	2.500		1.00	0.0100	-10.6	50.0
4-Chlorotoluene	Ave	0.8226	0.7829		1.00	0.0100	-4.8	50.0
tert-Butylbenzene	Ave	2.348	1.931		1.00	0.0100	-17.7	50.0
1,2,4-Trimethylbenzene	Ave	2.905	2.627		1.00	0.0100	-9.6	50.0
sec-Butylbenzene	Ave	3.033	2.727		1.00	0.0100	-10.1	50.0
1,3-Dichlorobenzene	Ave	1.437	1.411		1.00	0.0100	-1.8	50.0
p-Isopropyltoluene	Ave	2.361	2.242		1.00	0.0100	-5.0	50.0
1,4-Dichlorobenzene	Ave	1.520	1.476		1.00	0.0100	-2.9	50.0
n-Butylbenzene	Ave	2.305	1.897		1.00	0.0100	-17.7	50.0
1,2-Dichlorobenzene	Ave	1.395	1.378		1.00	0.0100	-1.2	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0875	0.0694		2.00	0.0100	-20.7	50.0
1,3,5-Trichlorobenzene	Ave	0.6679	0.7616		1.00	0.0100	14.0	50.0
1,2,4-Trichlorobenzene	Ave	0.5807	0.6172		1.00	0.0100	6.3	50.0
Hexachlorobutadiene	Ave	0.2215	0.2939		1.00	0.0100	32.7	50.0
Naphthalene	Ave	1.766	1.253		1.00	0.0100	-29.1	50.0

FORM VII 8260B

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85318/2 Calibration Date: 05/09/2013 12:35

Instrument ID: A3UX16 Calib Start Date: 02/07/2013 13:27

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/07/2013 15:20

Lab File ID: UXM7869.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5263	0.5418		1.00	0.0100	2.9	50.0
Dibromofluoromethane (Surr)	Ave	0.2425	0.2229		0.00938	0.0102	-8.1	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4112	0.2807		0.00697	0.0102	-31.7	50.0
Toluene-d8 (Surr)	Ave	1.642	1.285		0.00799	0.0102	-21.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5645	0.4363		0.00789	0.0102	-22.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCV 240-85318/3 Calibration Date: 05/09/2013 12:58

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM7870.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5937	0.5257		2.00	0.0100	-11.5	50.0
Ethyl ether	Ave	0.2922	0.2736		2.00	0.0100	-6.3	50.0
3-Chloro-1-propene	Ave	0.1704	0.1409		2.00	0.0100	-17.3	50.0
Diisopropyl ether	Ave	0.2920	0.2823		10.0	0.0500	-3.3	50.0
2-Chloro-1,3-butadiene	Ave	0.5805	0.5302		2.00	0.0100	-8.7	50.0
Ethyl-t-butyl ether (ETBE)	Ave	1.022	0.7331		5.00	0.0100	-28.3	50.0
Propionitrile	Ave	0.0381	0.0365		4.00	0.0200	-4.1	50.0
Ethyl acetate	Ave	0.2509	0.2233		4.00	0.0200	-11.0	50.0
Methacrylonitrile	Ave	0.1909	0.1592		2.00	0.0100	-16.6	50.0
Isobutyl alcohol	Ave	0.0074	0.0063		50.0	0.200	-15.6	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.8526	0.5565		5.00	0.0100	-34.7	50.0
n-Heptane	Ave	0.0536	0.0464		1.00	0.0100	-13.4	50.0
n-Butanol	Ave	0.0051	0.0040		50.0	0.200	-20.6	50.0
Methyl methacrylate	Ave	0.2196	0.1879		2.00	0.0100	-14.4	50.0
2-Nitropropane	Ave	0.0428	0.0364		2.00	0.0200	-14.9	50.0
Cyclohexanone	Ave	0.0930	0.0560		20.0	0.100	-39.7	50.0
1,2,3-Trimethylbenzene	Ave	2.644	2.735		0.0103	0.0100	3.4	50.0
2-Methylnaphthalene	Ave	0.9440	0.5602		5.00	0.0200	-40.7	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB224.D BFB Injection Date: 05/07/2013

Instrument ID: A3UX17 BFB Injection Time: 11:36

Analysis Batch No.: 84979

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.8	
75	30.0 - 60.0 % of mass 95	46.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.4	(0.6)1
174	50.0 - 120.00 % of mass 95	75.7	
175	5.0 - 9.0 % of mass 174	5.3	(7.0)1
176	95.0 - 101.0 % of mass 174	76.1	(100.5)1
177	5.0 - 9.0 % of mass 176	4.8	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-84979/2	UXR4175.D	05/07/2013	11:59
	STD8260 240-84979/3	UXR4176.D	05/07/2013	12:21
	STD8260 240-84979/4	UXR4177.D	05/07/2013	12:44
	STD8260 240-84979/5	UXR4178.D	05/07/2013	13:06
	STD8260 240-84979/6	UXR4179.D	05/07/2013	13:29
	STD8260 240-84979/7	UXR4180.D	05/07/2013	13:51
	STDA9 240-84979/8	UXR4181.D	05/07/2013	14:13
	STDA9 240-84979/9	UXR4182.D	05/07/2013	14:35
	STDA9 240-84979/10	UXR4183.D	05/07/2013	14:57
	STDA9 240-84979/11	UXR4184.D	05/07/2013	15:20
	STDA9 240-84979/12	UXR4185.D	05/07/2013	15:42
	STDA9 240-84979/13	UXR4186.D	05/07/2013	16:05

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-23844-1 | Analy Batch No.: 84979

SDG No.:

Instrument ID: A30X17 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 | Calibration End Date: 05/07/2013 13:51 | Calibration ID: 15035

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-84979/7	UXR4180.D
Level 2	STD8260 240-84979/6	UXR4179.D
Level 3	STD8260 240-84979/5	UXR4178.D
Level 4	STD8260 240-84979/4	UXR4177.D
Level 5	STD8260 240-84979/3	UXR4176.D
Level 6	STD8260 240-84979/2	UXR4175.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2355 0.2706	0.2308	0.2416	0.2540	0.2889	Ave		0.2536				8.9		15.0			
Chloromethane	0.4734 0.4194	0.4323	0.4136	0.4135	0.4360	Ave		0.4314			0.1000	5.3		15.0			
Vinyl chloride	0.3868 0.3669	0.3503	0.3592	0.3628	0.3924	Ave		0.3697				4.4		15.0			
Bromomethane	0.1486 0.1101	0.1282	0.1179	0.1208	0.1248	Ave		0.1251				10.0		15.0			
Chloroethane	0.2513 0.1989	0.2159	0.2054	0.2028	0.2182	Ave		0.2154				8.9		15.0			
Trichlorofluoromethane	0.2227 0.2298	0.2110	0.2272	0.2404	0.2569	Ave		0.2313				6.8		15.0			
Acrolein	0.0514 0.0527	0.0512	0.0508	0.0520	0.0577	Ave		0.0526				4.9		15.0			
1,1-Dichloroethene	0.2465 0.2612	0.2513	0.2690	0.2681	0.2772	Ave		0.2622				4.4		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1758 0.1752	0.1414	0.1852	0.1869	0.1909	Ave		0.1759				10.0		15.0			
Acetone	0.3361 0.0867	0.1561	0.1117	0.1041	0.0969	Lin1	0.2590	0.0866							0.9980		0.9900
Iodomethane	0.3646 0.3891	0.3865	0.3927	0.4002	0.4114	Ave		0.3908				4.0		15.0			
Carbon disulfide	0.8209 0.8717	0.8178	0.8514	0.8776	0.9154	Ave		0.8591				4.3		15.0			
~~Acetonitrile~~	0.0501 0.0385	0.0425	0.0403	0.0402	0.0433	Ave		~~0.0425~~				9.7		15.0			
Methyl acetate	0.2447 0.2290	0.2283	0.2371	0.2351	0.2488	Ave		0.2372				3.5		15.0			
Methylene Chloride	0.7175 0.2922	0.4122	0.3278	0.3135	0.3181	Lin1	0.2168	0.2930							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0239 0.0219	0.0247	0.0248	0.0250	0.0256	Ave		0.0243				5.4		15.0			
Acrylonitrile	0.1245 0.1177	0.1175	0.1192	0.1206	0.1298	Ave		0.1215				3.9		15.0			
Methyl tert-butyl ether	0.7890 0.8108	0.8103	0.8249	0.8369	0.8658	Ave		0.8230				3.2		15.0			
trans-1,2-Dichloroethene	0.2859 0.2861	0.2881	0.2898	0.2955	0.3065	Ave		0.2920				2.7		15.0			
Hexane	0.0676 0.0716	0.0554	0.0702	0.0722	0.0722	Ave		0.0682				9.5		15.0			
1,1-Dichloroethane	0.4969 0.5312	0.5205	0.5144	0.5288	0.5544	Ave		0.5243			0.1000	3.7		15.0			
Vinyl acetate	0.0475 0.0584	0.0400	0.0486	0.0519	0.0569	Ave		0.0505				13.0		15.0			
2,2-Dichloropropane	0.2596 0.2751	0.2680	0.2775	0.2883	0.3015	Ave		0.2783				5.3		15.0			
cis-1,2-Dichloroethene	0.3036 0.3073	0.3104	0.3050	0.3111	0.3255	Ave		0.3105				2.6		15.0			
2-Butanone	0.1770 0.1295	0.1415	0.1327	0.1333	0.1393	Ave		0.1422				12.0		15.0			
Bromochloromethane	0.1303 0.1408	0.1421	0.1367	0.1399	0.1468	Ave		0.1394				4.0		15.0			
Tetrahydrofuran	0.1861 0.0890	0.1289	0.1060	0.1011	0.0980	Lin1	0.0562	0.0913							0.9970		0.9900
Chloroform	0.4513 0.4643	0.4583	0.4588	0.4727	0.4887	Ave		0.4657				2.9		15.0			
1,1,1-Trichloroethane	0.3476 0.3632	0.3450	0.3677	0.3715	0.3827	Ave		0.3629				4.0		15.0			
Cyclohexane	0.5464 0.5828	0.4652	0.5918	0.5990	0.6029	Ave		0.5647				9.3		15.0			
1,1-Dichloropropene	0.3654 0.3810	0.3551	0.3822	0.3848	0.3985	Ave		0.3778				4.1		15.0			
Carbon tetrachloride	0.2558 0.3143	0.2612	0.2924	0.3064	0.3201	Ave		0.2917				9.4		15.0			
Benzene	1.2323 1.1698	1.1620	1.1360	1.1660	1.2134	Ave		1.1799				3.0		15.0			
1,2-Dichloroethane	0.3551 0.3872	0.3897	0.3880	0.3927	0.4088	Ave		0.3869				4.5		15.0			
Trichloroethene	0.2620 0.2875	0.2708	0.2833	0.2843	0.2912	Ave		0.2799				4.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4904 0.4934	0.3894	0.5076	0.5154	0.5124	Ave		0.4848				9.9		15.0			
1,2-Dichloropropane	0.2649 0.2925	0.2834	0.2837	0.2885	0.3027	Ave		0.2859				4.4		15.0			
1,~~4-Dioxane~~	0.0027 0.0024	0.0031	0.0029	0.0030	0.0030	Ave		~~0.0028~~				9.4		15.0			
Dibromomethane	0.1402 0.1536	0.1511	0.1540	0.1568	0.1617	Ave		0.1529				4.7		15.0			
Bromodichloromethane	0.2860 0.3411	0.2964	0.3112	0.3198	0.3452	Ave		0.3166				7.5		15.0			
2-Chloroethyl vinyl ether	0.1650 0.1798	0.1627	0.1671	0.1725	0.1872	Ave		0.1724				5.5		15.0			
cis-1,3-Dichloropropene	0.3253 0.4446	0.3783	0.3940	0.4230	0.4547	Ave		0.4033				12.0		15.0			
4-Methyl-2-pentanone	0.2984 0.2815	0.2630	0.2727	0.2783	0.2999	Ave		0.2823				5.1		15.0			
Toluene	1.7134 1.5692	1.5364	1.5176	1.5124	1.5963	Ave		1.5742				4.8		15.0			
trans-1,3-Dichloropropene	0.3509 0.4890	0.3844	0.4223	0.4478	0.4855	Ave		0.4300				13.0		15.0			
Ethyl methacrylate	0.3917 0.4665	0.4073	0.4308	0.4481	0.4769	Ave		0.4369				7.6		15.0			
1,1,2-Trichloroethane	0.2790 0.2797	0.2752	0.2835	0.2807	0.2923	Ave		0.2817				2.1		15.0			
Tetrachloroethene	0.2780 0.2812	0.2580	0.2759	0.2746	0.2859	Ave		0.2756				3.5		15.0			
1,3-Dichloropropane	0.5120 0.5348	0.5237	0.5289	0.5252	0.5517	Ave		0.5294				2.5		15.0			
2-Hexanone	0.2406 0.2320	0.2216	0.2228	0.2232	0.2476	Ave		0.2313				4.7		15.0			
Dibromochloromethane	0.2646 0.3082	0.2428	0.2739	0.2845	0.3065	Ave		0.2801				9.0		15.0			
1,2-Dibromoethane	0.2530 0.2848	0.2769	0.2782	0.2787	0.2958	Ave		0.2779				5.1		15.0			
Chlorobenzene	0.9911 1.0215	1.0148	0.9932	1.0107	1.0528	Ave		1.0140			0.3000	2.2		15.0			
1,1,1,2-Tetrachloroethane	0.2977 0.3342	0.2991	0.3137	0.3215	0.3420	Ave		0.3180				5.7		15.0			
Ethylbenzene	0.4921 0.5485	0.5108	0.5255	0.5370	0.5656	Ave		0.5299				5.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6457 0.6946	0.6446	0.6659	0.6809	0.7110	Ave		0.6738				4.0		15.0			
o-Xylene	0.6134 0.6631	0.6114	0.6583	0.6557	0.6953	Ave		0.6495				4.9		15.0			
Styrene	0.9450 1.1555	1.0389	1.0792	1.1253	1.1801	Ave		1.0874				7.9		15.0			
Bromoform	0.1431 0.1921	0.1476	0.1586	0.1726	0.1887	Ave		0.1671			0.1000	12.0		15.0			
Isopropylbenzene	1.6240 1.7527	1.6238	1.6873	1.7253	1.8323	Ave		1.7076				4.7		15.0			
1,1,2,2-Tetrachloroethane	0.6666 0.6735	0.6773	0.6573	0.6820	0.7192	Ave		0.6793			0.3000	3.1		15.0			
Bromobenzene	0.6834 0.7450	0.7299	0.7496	0.7530	0.7967	Ave		0.7429				4.9		15.0			
1,2,3-Trichloropropane	0.2114 0.2130	0.2144	0.2164	0.2207	0.2327	Ave		0.2181				3.6		15.0			
trans-1,4-Dichloro-2-butene	0.1296 0.2009	0.1558	0.1543	0.1744	0.2047	Lin1	-0.059	0.1984							0.9950		0.9900
n-Propylbenzene	0.7683 0.8695	0.7749	0.8511	0.8630	0.9215	Ave		0.8414				7.0		15.0			
2-Chlorotoluene	0.7196 0.7255	0.6913	0.7230	0.7250	0.7825	Ave		0.7278				4.1		15.0			
1,3,5-Trimethylbenzene	2.2988 2.6539	2.3841	2.5454	2.6045	2.7912	Ave		2.5463				7.1		15.0			
4-Chlorotoluene	0.7510 0.7649	0.7327	0.7660	0.7678	0.8229	Ave		0.7676				3.9		15.0			
tert-Butylbenzene	2.2846 2.3326	2.1515	2.3115	2.3560	2.4994	Ave		2.3226				4.8		15.0			
1,2,4-Trimethylbenzene	2.4265 2.6920	2.4641	2.6132	2.6323	2.8575	Ave		2.6143				6.0		15.0			
sec-Butylbenzene	2.9288 3.2650	2.8781	3.2128	3.2083	3.4370	Ave		3.1550				6.7		15.0			
1,3-Dichlorobenzene	1.4880 1.4645	1.4587	1.4725	1.4756	1.5809	Ave		1.4900				3.1		15.0			
p-Isopropyltoluene	2.4515 2.7770	2.4445	2.6728	2.7606	2.9571	Ave		2.6772				7.5		15.0			
1,4-Dichlorobenzene	1.5393 1.5043	1.5181	1.5067	1.4875	1.6151	Ave		1.5285				3.0		15.0			
n-Butylbenzene	2.2095 2.4953	2.1839	2.4088	2.4614	2.6597	Ave		2.4031				7.5		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4224 1.3693	1.3916	1.4052	1.3937	1.4838	Ave		1.4110				2.8		15.0			
1,2-Dibromo-3-Chloropropane	0.1115 0.1099	0.1019	0.1076	0.1103	0.1224	Ave		0.1106				6.1		15.0			
1,3,5-Trichlorobenzene	1.0968 0.9780	1.0641	1.0746	1.0703	1.1375	Ave		1.0702				4.9		15.0			
1,2,4-Trichlorobenzene	1.1246 0.7865	0.9817	0.9741	0.9640	1.0256	Ave		0.9761				11.0		15.0			
Hexachlorobutadiene	0.4553 0.3133	0.3818	0.4025	0.3894	0.4073	Ave		0.3916				12.0		15.0			
Naphthalene	2.5204 1.6869	2.1836	2.1729	2.2154	2.3572	Ave		2.1894				13.0		15.0			
1,2,3-Trichlorobenzene	1.1382	0.9416	0.8942	0.8898	0.8994	Ave		0.9526				11.0		15.0			
Dibromofluoromethane (Surr)	0.2029 0.2331	0.2162	0.2192	0.2291	0.2440	Ave		0.2241				6.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2843 0.2990	0.2927	0.2924	0.3010	0.3121	Ave		0.2969				3.2		15.0			
Toluene-d8 (Surr)	1.0919 1.2500	1.1912	1.1790	1.1959	1.2910	Ave		1.1998				5.7		15.0			
4-Bromofluorobenzene (Surr)	0.4560 0.4876	0.4865	0.4774	0.4758	0.5163	Ave		0.4833				4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 14:13 Calibration End Date: 05/07/2013 16:05 Calibration ID: 15038

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-84979/13	UXR4186.D
Level 2	STDA9 240-84979/12	UXR4185.D
Level 3	STDA9 240-84979/11	UXR4184.D
Level 4	STDA9 240-84979/10	UXR4183.D
Level 5	STDA9 240-84979/9	UXR4182.D
Level 6	STDA9 240-84979/8	UXR4181.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4720 0.4666	0.4444	0.4425	0.4216	0.4511	Ave		0.4497				4.0		15.0			
Ethyl ether	0.2660 0.2823	0.2592	0.2598	0.2486	0.2724	Ave		0.2647				4.4		15.0			
3-Chloro-1-propene	0.1359 0.1610	0.1324	0.1370	0.1376	0.1525	Ave		0.1427				7.9		15.0			
Diisopropyl ether	0.2473 0.2740	0.2449	0.2495	0.2413	0.2619	Ave		0.2531				4.9		15.0			
2-Chloro-1,3-butadiene	0.4637 0.5263	0.4684	0.4797	0.4705	0.5114	Ave		0.4867				5.3		15.0			
Ethyl-t-butyl ether (ETBE)	0.9024 1.0209	0.8872	0.9050	0.8908	0.9641	Ave		0.9284				5.7		15.0			
Ethyl acetate	0.2738 0.2913	0.2604	0.2567	0.2603	0.2798	Ave		0.2704				5.0		15.0			
~~Propionitrile~~	0.0395 0.0446	0.0399	0.0413	0.0388	0.0444	Ave		~~0.0414~~				6.1		15.0			
Methacrylonitrile	0.2320 0.1962	0.2047	0.1845	0.1766	0.1935	Ave		0.1979				9.8		15.0			
~~Isobutyl alcohol~~	0.0129 0.0119	0.0118	0.0112	0.0113	0.0120	Ave		~~0.0118~~				4.9		15.0			
Tert-amyl-methyl ether (TAME)	0.7464 0.8505	0.7381	0.7539	0.7377	0.8150	Ave		0.7736				6.1		15.0			
~~n-Heptane~~	0.0701 0.0767	0.0672	0.0711	0.0682	0.0753	Ave		0.0714				5.4		15.0			
n-Butanol	0.0085 0.0102	0.0089	0.0092	0.0093	0.0103	Ave		~~0.0094~~				7.5		15.0			
Methyl methacrylate	0.2379 0.2805	0.2371	0.2462	0.2423	0.2654	Ave		0.2516				7.0		15.0			
2-Nitropropane	0.0556 0.0713	0.0560	0.0523	0.0573	0.0637	Ave		0.0594				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 14:13 Calibration End Date: 05/07/2013 16:05 Calibration ID: 15038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.1022 0.1284	0.1025	0.1176	0.1228	0.1393	Ave		0.1188				12.0		15.0			
1,2,3-Trimethylbenzene	2.3866 2.6962	2.4621	2.4926	2.4662	2.6461	Ave		2.5250				4.7		15.0			
~~2-Methylnaphthalene~~	1.5422	1.4901	1.2024	1.0735	0.7790	Ave		1.2174				~~26.0~~	*	15.0			
n-Butyl acetate	0.2099 0.2525	0.2109	0.2217	0.2175	0.2461	Ave		0.2264				8.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: BFB233.D BFB Injection Date: 05/13/2013

Instrument ID: A3UX17 BFB Injection Time: 10:01

Analysis Batch No.: 85645

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	48.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	76.3	
175	5.0 - 9.0 % of mass 174	5.5	(7.2)1
176	95.0 - 101.0 % of mass 174	76.8	(100.6)1
177	5.0 - 9.0 % of mass 176	5.2	(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-85645/2	UXR4334.D	05/13/2013	10:30
	CCV 240-85645/3	UXR4335.D	05/13/2013	10:52
	LCS 240-85645/4	UXR4336.D	05/13/2013	11:15
	MB 240-85645/5	UXR4337.D	05/13/2013	11:37
MRC-MW100B-043013	240-23844-3	UXR4340.D	05/13/2013	12:49
	240-23884-E-12 MS	UXR4359.D	05/13/2013	19:46
	240-23884-E-12 MSD	UXR4360.D	05/13/2013	20:07

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85645/2 Calibration Date: 05/13/2013 10:30

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4334.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2536	0.2891		1.00	0.0100	14.0	50.0
Chloromethane	Ave	0.4314	0.4253	0.1000	1.00	0.0100	-1.4	50.0
Vinyl chloride	Ave	0.3697	0.3756		1.00	0.0100	1.6	20.0
Bromomethane	Ave	0.1251	0.1469		1.00	0.0100	17.5	50.0
Chloroethane	Ave	0.2154	0.2063		1.00	0.0100	-4.2	50.0
Trichlorofluoromethane	Ave	0.2313	0.3109		1.00	0.0100	34.4	50.0
Acrolein	Ave	0.0526	0.0330		20.0	0.100	-37.3	50.0
1,1-Dichloroethene	Ave	0.2622	0.2585		1.00	0.0100	-1.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1759	0.2019		1.00	0.0100	14.8	50.0
Acetone	Lin1		0.0723		10.0	0.0200	-31.5	50.0
Iodomethane	Ave	0.3908	0.3933		1.00	0.0100	0.6	50.0
Carbon disulfide	Ave	0.8591	0.8425		1.00	0.0100	-1.9	50.0
Acetonitrile	Ave	0.0425	0.0288		20.0	0.100	-32.2	50.0
Methyl acetate	Ave	0.2372	0.1845		10.0	0.0200	-22.2	50.0
Methylene Chloride	Lin1		0.3116		1.00	0.0100	-1.1	50.0
tert-Butyl alcohol	Ave	0.0243	0.0151		50.0	0.200	-37.8	50.0
Acrylonitrile	Ave	0.1215	0.0912		20.0	0.0200	-25.0	50.0
Methyl tert-butyl ether	Ave	0.8230	0.7090		1.00	0.0100	-13.9	50.0
trans-1,2-Dichloroethene	Ave	0.2920	0.2776		1.00	0.0100	-4.9	50.0
Hexane	Ave	0.0682	0.0699		1.00	0.0100	2.4	20.0
1,1-Dichloroethane	Ave	0.5243	0.5184	0.1000	1.00	0.0100	-1.1	50.0
Vinyl acetate	Ave	0.0505	0.0400		2.00	0.0100	-20.9	50.0
2,2-Dichloropropane	Ave	0.2783	0.3029		1.00	0.0100	8.8	50.0
2-Butanone	Ave	0.1422	0.0982		10.0	0.0200	-31.0	50.0
cis-1,2-Dichloroethene	Ave	0.3105	0.3100		1.00	0.0100	-0.2	50.0
Bromochloromethane	Ave	0.1394	0.1349		1.00	0.0100	-3.3	50.0
Tetrahydrofuran	Lin1		0.0750		5.00	0.0100	-24.0	50.0
Chloroform	Ave	0.4657	0.4731		1.00	0.0100	1.6	20.0
1,1,1-Trichloroethane	Ave	0.3629	0.3819		1.00	0.0100	5.2	50.0
Cyclohexane	Ave	0.5647	0.6101		1.00	0.0100	8.0	50.0
1,1-Dichloropropene	Ave	0.3778	0.3825		1.00	0.0100	1.2	50.0
Carbon tetrachloride	Ave	0.2917	0.3497		1.00	0.0100	19.9	50.0
Benzene	Ave	1.180	1.151		1.00	0.0100	-2.4	50.0
1,2-Dichloroethane	Ave	0.3869	0.3796		1.00	0.0100	-1.9	50.0
Trichloroethene	Ave	0.2799	0.2772		1.00	0.0100	-1.0	50.0
Methylcyclohexane	Ave	0.4848	0.5125		1.00	0.0100	5.7	50.0
1,2-Dichloropropane	Ave	0.2859	0.2890		1.00	0.0100	1.1	20.0
1,4-Dioxane	Ave	0.0028	0.0018		50.0	0.500	-35.5	50.0
Dibromomethane	Ave	0.1529	0.1474		1.00	0.0100	-3.6	50.0
Bromodichloromethane	Ave	0.3166	0.3301		1.00	0.0100	4.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85645/2 Calibration Date: 05/13/2013 10:30

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4334.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1724	0.1576		10.0	0.0200	-8.6	50.0
cis-1,3-Dichloropropene	Ave	0.4033	0.4179		1.00	0.0100	3.6	50.0
4-Methyl-2-pentanone	Ave	0.2823	0.2201		10.0	0.0200	-22.0	50.0
Toluene	Ave	1.574	1.533		1.00	0.0100	-2.6	20.0
trans-1,3-Dichloropropene	Ave	0.4300	0.4432		1.00	0.0100	3.1	50.0
Ethyl methacrylate	Ave	0.4369	0.3907		1.00	0.0100	-10.6	50.0
1,1,2-Trichloroethane	Ave	0.2817	0.2734		1.00	0.0100	-3.0	50.0
Tetrachloroethene	Ave	0.2756	0.2856		1.00	0.0100	3.6	50.0
1,3-Dichloropropane	Ave	0.5294	0.5041		1.00	0.0100	-4.8	50.0
2-Hexanone	Ave	0.2313	0.1785		10.0	0.0200	-22.8	50.0
Dibromochloromethane	Ave	0.2801	0.2859		1.00	0.0100	2.1	50.0
1,2-Dibromoethane	Ave	0.2779	0.2616		1.00	0.0100	-5.9	50.0
Chlorobenzene	Ave	1.014	1.002	0.3000	1.00	0.0100	-1.2	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3180	0.3171		1.00	0.0100	-0.3	50.0
Ethylbenzene	Ave	0.5299	0.5361		1.00	0.0100	1.2	20.0
m-Xylene & p-Xylene	Ave	0.6738	0.6851		2.00	0.0200	1.7	50.0
o-Xylene	Ave	0.6495	0.6521		1.00	0.0100	0.4	50.0
Styrene	Ave	1.087	1.095		1.00	0.0100	0.7	50.0
Bromoform	Ave	0.1671	0.1620	0.1000	1.00	0.0100	-3.0	50.0
Isopropylbenzene	Ave	1.708	1.697		1.00	0.0100	-0.6	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6793	0.6128	0.3000	1.00	0.0100	-9.8	50.0
Bromobenzene	Ave	0.7429	0.7295		1.00	0.0100	-1.8	50.0
1,2,3-Trichloropropane	Ave	0.2181	0.1952		1.00	0.0100	-10.5	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1861		1.00	0.0100	-3.2	50.0
n-Propylbenzene	Ave	0.8414	0.8515		1.00	0.0100	1.2	50.0
2-Chlorotoluene	Ave	0.7278	0.7032		1.00	0.0100	-3.4	50.0
1,3,5-Trimethylbenzene	Ave	2.546	2.532		1.00	0.0100	-0.5	50.0
4-Chlorotoluene	Ave	0.7676	0.7507		1.00	0.0100	-2.2	50.0
tert-Butylbenzene	Ave	2.323	2.269		1.00	0.0100	-2.3	50.0
1,2,4-Trimethylbenzene	Ave	2.614	2.592		1.00	0.0100	-0.9	50.0
sec-Butylbenzene	Ave	3.155	3.174		1.00	0.0100	0.6	50.0
1,3-Dichlorobenzene	Ave	1.490	1.426		1.00	0.0100	-4.3	50.0
p-Isopropyltoluene	Ave	2.677	2.658		1.00	0.0100	-0.7	50.0
1,4-Dichlorobenzene	Ave	1.529	1.465		1.00	0.0100	-4.2	50.0
n-Butylbenzene	Ave	2.403	2.370		1.00	0.0100	-1.4	50.0
1,2-Dichlorobenzene	Ave	1.411	1.315		1.00	0.0100	-6.8	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1106	0.0795		2.00	0.0100	-28.1	50.0
1,3,5-Trichlorobenzene	Ave	1.070	0.9240		1.00	0.0100	-13.7	50.0
1,2,4-Trichlorobenzene	Ave	0.9761	0.6998		1.00	0.0100	-28.3	50.0
Hexachlorobutadiene	Ave	0.3916	0.3115		1.00	0.0100	-20.5	50.0
Naphthalene	Ave	2.189	1.311		1.00	0.0100	-40.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85645/2 Calibration Date: 05/13/2013 10:30

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4334.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.9526	0.4807		1.00	0.0100	-49.5	50.0
Dibromofluoromethane (Surr)	Ave	0.2241	0.2205		0.00877	0.00891	-1.6	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2969	0.2819		0.00846	0.00891	-5.0	50.0
Toluene-d8 (Surr)	Ave	1.200	1.209		0.00898	0.00891	0.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4833	0.4749		0.00876	0.00891	-1.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCV 240-85645/3 Calibration Date: 05/13/2013 10:52

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 14:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 16:05

Lab File ID: UXR4335.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.4497	0.4365		2.00	0.0100	-2.9	50.0
Ethyl ether	Ave	0.2647	0.2477		2.00	0.0100	-6.4	50.0
3-Chloro-1-propene	Ave	0.1427	0.1278		2.00	0.0100	-10.5	50.0
Diisopropyl ether	Ave	0.2531	0.2229		10.0	0.0500	-12.0	50.0
2-Chloro-1,3-butadiene	Ave	0.4867	0.4473		2.00	0.0100	-8.1	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.9284	0.7433		5.00	0.0100	-19.9	50.0
Ethyl acetate	Ave	0.2704	0.2161		4.00	0.0200	-20.1	50.0
Propionitrile	Ave	0.0414	0.0323		4.00	0.0200	-22.1	50.0
Methacrylonitrile	Ave	0.1979	0.1497		2.00	0.0100	-24.4	50.0
Isobutyl alcohol	Ave	0.0118	0.0086		50.0	0.200	-28.8	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.7736	0.6655		5.00	0.0100	-14.0	50.0
n-Heptane	Ave	0.0714	0.0714		1.00	0.0100	0.0	50.0
n-Butanol	Ave	0.0094	0.0055		50.0	0.200	-41.7	50.0
Methyl methacrylate	Ave	0.2516	0.2145		2.00	0.0100	-14.7	50.0
2-Nitropropane	Ave	0.0594	0.0560		2.00	0.0200	-5.8	50.0
Cyclohexanone	Ave	0.1188	0.0886		20.0	0.100	-25.4	50.0
1,2,3-Trimethylbenzene	Ave	2.525	2.457		0.00973	0.0100	-2.7	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: UXM7873.D Lab Sample ID: MB 240-85318/6

Matrix: Water Heated Purge: (Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/09/2013 14:06

GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85318/4	UXM7871.D	05/09/2013 13:21
TB-043013	240-23844-1	UXM7876.D	05/09/2013 15:15
MRC-OF07-043013	240-23844-4	UXM7879.D	05/09/2013 16:23
MRC-MW-94D-043013	240-23844-5	UXM7880.D	05/09/2013 16:45
MRC-MW-93D-043013	240-23844-6	UXM7881.D	05/09/2013 17:08

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85318/6

Matrix: Water | Lab File ID: UXM7873.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2013 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85318 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	0.185	J	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85318/6

Matrix: Water Lab File ID: UXM7873.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.00		1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85318/6

Matrix: Water Lab File ID: UXM7873.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	70		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		63-129
2037-26-5	Toluene-d8 (Surr)	77		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85318/6

Matrix: Water Lab File ID: UXM7873.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2013 14:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85318 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7871.D

Lab ID: LCS 240-85318/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	14.2	71	43-136	
Benzene	10.0	10.7	107	83-112	
Bromobenzene	10.0	11.1	111	76-115	
Bromochloromethane	10.0	11.4	114	77-120	
Bromodichloromethane	10.0	10.4	104	72-121	
Bromoform	10.0	10.9	109	40-131	
Bromomethane	10.0	13.0	130	11-185	
2-Butanone	20.0	14.4	72	60-126	
Carbon disulfide	10.0	9.40	94	62-142	
Carbon tetrachloride	10.0	11.3	113	66-128	
Chlorobenzene	10.0	10.6	106	85-110	
Chloroethane	10.0	7.17	72	25-153	
2-Chloroethyl vinyl ether	10.0	8.50 J	85	52-131	
Chloroform	10.0	9.68	97	79-117	
Chloromethane	10.0	8.22	82	44-126	
2-Chlorotoluene	10.0	9.92	99	76-116	
4-Chlorotoluene	10.0	9.94	99	77-115	
cis-1,2-Dichloroethene	10.0	10.4	104	80-113	
cis-1,3-Dichloropropene	10.0	9.34	93	61-115	
Dibromochloromethane	10.0	10.1	101	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.70	87	42-136	
1,2-Dibromoethane	10.0	9.62	96	79-113	
Dibromomethane	10.0	10.4	104	81-120	
1,2-Dichlorobenzene	10.0	10.3	103	81-110	
1,3-Dichlorobenzene	10.0	10.3	103	80-110	
1,4-Dichlorobenzene	10.0	10.2	102	82-110	
Dichlorodifluoromethane	10.0	12.7	127	19-129	
1,1-Dichloroethane	10.0	9.12	91	82-115	
1,2-Dichloroethane	10.0	8.66	87	71-127	
1,1-Dichloroethene	10.0	10.4	104	78-131	
1,2-Dichloropropane	10.0	9.93	99	81-115	
1,3-Dichloropropane	10.0	8.94	89	79-116	
2,2-Dichloropropane	10.0	6.91	69	50-129	
1,1-Dichloropropene	10.0	9.50	95	83-114	
Diisopropyl ether	10.0	10.0	100	77-118	
Ethylbenzene	10.0	10.1	101	83-112	
Hexachlorobutadiene	10.0	11.4	114	36-134	
2-Hexanone	20.0	14.1	70	55-133	
Isopropylbenzene	10.0	9.48	95	75-114	
Methylene Chloride	10.0	10.2	102	66-131	
4-Methyl-2-pentanone	20.0	15.1	75	63-128	
Methyl tert-butyl ether	10.0	7.70	77	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7871.D

Lab ID: LCS 240-85318/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	21.0	105	83-113	
Naphthalene	10.0	6.85	69	32-141	
n-Butylbenzene	10.0	8.42	84	66-125	
n-Propylbenzene	10.0	10.0	100	74-121	
o-Xylene	10.0	9.99	100	83-113	
p-Isopropyltoluene	10.0	9.91	99	74-120	
sec-Butylbenzene	10.0	8.90	89	70-117	
Styrene	10.0	9.56	96	79-114	
tert-Butyl alcohol	200	147	73	70-130	
tert-Butylbenzene	10.0	9.47	95	71-115	
1,1,1,2-Tetrachloroethane	10.0	11.3	113	72-116	
1,1,2,2-Tetrachloroethane	10.0	7.49	75	68-118	
Tetrachloroethene	10.0	12.5	125	79-114	*
Toluene	10.0	9.53	95	84-111	
trans-1,2-Dichloroethene	10.0	10.4	104	83-117	
trans-1,3-Dichloropropene	10.0	8.14	81	58-117	
1,2,3-Trichlorobenzene	10.0	9.51	95	54-126	
1,2,4-Trichlorobenzene	10.0	9.20	92	48-135	
1,1,1-Trichloroethane	10.0	9.20	92	74-118	
Trichloroethene	10.0	12.1	121	76-117	*
Trichlorofluoromethane	10.0	19.6	196	49-157	*
1,2,3-Trichloropropane	10.0	8.27	83	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	16.6	166	74-151	*
1,2,3-Trimethylbenzene	10.0	10.7	107	70-130	
1,2,4-Trimethylbenzene	10.0	9.38	94	76-120	
Vinyl acetate	10.0	8.68	87	46-161	
Vinyl chloride	10.0	8.08	81	53-127	
Xylenes, Total	30.0	31.0	103	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: UXR4337.D Lab Sample ID: MB 240-85645/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX17 Date Analyzed: 05/13/2013 11:37

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85645/4	UXR4336.D	05/13/2013 11:15
MRC-MW100B-043013	240-23844-3	UXR4340.D	05/13/2013 12:49
	240-23884-E-12 MS	UXR4359.D	05/13/2013 19:46
	240-23884-E-12 MSD	UXR4360.D	05/13/2013 20:07

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85645/5

Matrix: Water | Lab File ID: UXR4337.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 11:37

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85645 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85645/5

Matrix: Water Lab File ID: UXR4337.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 11:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85645 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	0.871	J	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	0.501	J	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.02		1.0	0.24
104-51-8	n-Butylbenzene	0.162	J	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.32		1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	0.851	J	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85645/5

Matrix: Water Lab File ID: UXR4337.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 11:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85645 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	109		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	98		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85645/5

Matrix: Water Lab File ID: UXR4337.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 11:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85645 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4336.D

Lab ID: LCS 240-85645/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	15.9	79	43-136	
Benzene	10.0	9.79	98	83-112	
Bromobenzene	10.0	9.63	96	76-115	
Bromochloromethane	10.0	9.51	95	77-120	
Bromodichloromethane	10.0	10.4	104	72-121	
Bromoform	10.0	9.18	92	40-131	
Bromomethane	10.0	10.2	102	11-185	
2-Butanone	20.0	16.6	83	60-126	
Carbon disulfide	10.0	9.95	99	62-142	
Carbon tetrachloride	10.0	11.7	117	66-128	
Chlorobenzene	10.0	9.64	96	85-110	
Chloroethane	10.0	8.52	85	25-153	
2-Chloroethyl vinyl ether	10.0	9.30 J	93	52-131	
Chloroform	10.0	9.91	99	79-117	
Chloromethane	10.0	8.93	89	44-126	
2-Chlorotoluene	10.0	9.51	95	76-116	
4-Chlorotoluene	10.0	9.86	99	77-115	
cis-1,2-Dichloroethene	10.0	9.88	99	80-113	
cis-1,3-Dichloropropene	10.0	9.80	98	61-115	
Dibromochloromethane	10.0	9.60	96	64-119	
1,2-Dibromo-3-Chloropropane	10.0	7.31	73	42-136	
1,2-Dibromoethane	10.0	9.51	95	79-113	
Dibromomethane	10.0	9.97	100	81-120	
1,2-Dichlorobenzene	10.0	9.06	91	81-110	
1,3-Dichlorobenzene	10.0	9.35	94	80-110	
1,4-Dichlorobenzene	10.0	9.22	92	82-110	
Dichlorodifluoromethane	10.0	8.32	83	19-129	
1,1-Dichloroethane	10.0	9.91	99	82-115	
1,2-Dichloroethane	10.0	9.90	99	71-127	
1,1-Dichloroethene	10.0	10.2	102	78-131	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichloropropane	10.0	9.72	97	79-116	
2,2-Dichloropropane	10.0	10.2	102	50-129	
1,1-Dichloropropene	10.0	9.84	98	83-114	
Diisopropyl ether	10.0	10.2	102	77-118	
Ethylbenzene	10.0	9.77	98	83-112	
Hexachlorobutadiene	10.0	7.73	77	36-134	
2-Hexanone	20.0	16.3	81	55-133	
Isopropylbenzene	10.0	9.59	96	75-114	
Methylene Chloride	10.0	10.0	100	66-131	
4-Methyl-2-pentanone	20.0	17.2	86	63-128	
Methyl tert-butyl ether	10.0	9.27	93	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4336.D

Lab ID: LCS 240-85645/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.4	97	83-113	
Naphthalene	10.0	6.13	61	32-141	
n-Butylbenzene	10.0	9.66	97	66-125	
n-Propylbenzene	10.0	10.1	101	74-121	
o-Xylene	10.0	9.61	96	83-113	
p-Isopropyltoluene	10.0	10.0	100	74-120	
sec-Butylbenzene	10.0	9.74	97	70-117	
Styrene	10.0	9.91	99	79-114	
tert-Butyl alcohol	200	156	78	70-130	
tert-Butylbenzene	10.0	9.53	95	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.70	97	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.90	89	68-118	
Tetrachloroethene	10.0	9.97	100	79-114	
Toluene	10.0	9.38	94	84-111	
trans-1,2-Dichloroethene	10.0	10.1	101	83-117	
trans-1,3-Dichloropropene	10.0	9.45	94	58-117	
1,2,3-Trichlorobenzene	10.0	5.36	54	54-126	
1,2,4-Trichlorobenzene	10.0	7.13	71	48-135	
1,1,1-Trichloroethane	10.0	10.4	104	74-118	
Trichloroethene	10.0	10.1	101	76-117	
Trichlorofluoromethane	10.0	14.4	144	49-157	
1,2,3-Trichloropropane	10.0	9.07	91	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.5	125	74-151	
1,2,3-Trimethylbenzene	10.0	10.1	101	70-130	
1,2,4-Trimethylbenzene	10.0	9.64	96	76-120	
Vinyl acetate	10.0	7.55	75	46-161	
Vinyl chloride	10.0	9.39	94	53-127	
Xylenes, Total	30.0	29.0	97	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: UXJ1563.D Lab Sample ID: MB 240-85803/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX11 Date Analyzed: 05/14/2013 11:30

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85803/4	UXJ1561.D	05/14/2013 10:46
MRC-MW100A-043013	240-23844-2	UXJ1565.D	05/14/2013 12:16
	240-23944-H-4 MS	UXJ1579.D	05/14/2013 17:34
	240-23944-E-4 MSD	UXJ1580.D	05/14/2013 17:57

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85803/5

Matrix: Water | Lab File ID: UXJ1563.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 11:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85803 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85803/5

Matrix: Water Lab File ID: UXJ1563.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 11:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85803 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.24		1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85803/5

Matrix: Water Lab File ID: UXJ1563.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 11:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85803 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	85		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	86		63-129
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85803/5

Matrix: Water Lab File ID: UXJ1563.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 11:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85803 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1561.D

Lab ID: LCS 240-85803/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	20.9	104	43-136	
Benzene	10.0	9.17	92	83-112	
Bromobenzene	10.0	10.0	100	76-115	
Bromochloromethane	10.0	8.99	90	77-120	
Bromodichloromethane	10.0	9.90	99	72-121	
Bromoform	10.0	9.32	93	40-131	
Bromomethane	10.0	9.03	90	11-185	
2-Butanone	20.0	22.1	110	60-126	
Carbon disulfide	10.0	8.57	86	62-142	
Carbon tetrachloride	10.0	9.40	94	66-128	
Chlorobenzene	10.0	9.46	95	85-110	
Chloroethane	10.0	9.86	99	25-153	
2-Chloroethyl vinyl ether	10.0	9.42 J	94	52-131	
Chloroform	10.0	9.18	92	79-117	
Chloromethane	10.0	8.94	89	44-126	
2-Chlorotoluene	10.0	10.1	101	76-116	
4-Chlorotoluene	10.0	10.2	102	77-115	
cis-1,2-Dichloroethene	10.0	9.01	90	80-113	
cis-1,3-Dichloropropene	10.0	9.14	91	61-115	
Dibromochloromethane	10.0	10.1	101	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.98	90	42-136	
1,2-Dibromoethane	10.0	9.70	97	79-113	
Dibromomethane	10.0	9.92	99	81-120	
1,2-Dichlorobenzene	10.0	8.87	89	81-110	
1,3-Dichlorobenzene	10.0	9.18	92	80-110	
1,4-Dichlorobenzene	10.0	9.38	94	82-110	
Dichlorodifluoromethane	10.0	7.66	77	19-129	
1,1-Dichloroethane	10.0	9.47	95	82-115	
1,2-Dichloroethane	10.0	9.69	97	71-127	
1,1-Dichloroethene	10.0	8.87	89	78-131	
1,2-Dichloropropane	10.0	9.78	98	81-115	
1,3-Dichloropropane	10.0	9.95	100	79-116	
2,2-Dichloropropane	10.0	9.11	91	50-129	
1,1-Dichloropropene	10.0	9.28	93	83-114	
Diisopropyl ether	10.0	9.55	95	77-118	
Ethylbenzene	10.0	9.49	95	83-112	
Hexachlorobutadiene	10.0	6.53	65	36-134	
2-Hexanone	20.0	21.3	107	55-133	
Isopropylbenzene	10.0	9.33	93	75-114	
Methylene Chloride	10.0	9.77	98	66-131	
4-Methyl-2-pentanone	20.0	20.6	103	63-128	
Methyl tert-butyl ether	10.0	9.20	92	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1561.D

Lab ID: LCS 240-85803/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	18.9	94	83-113	
Naphthalene	10.0	4.78	48	32-141	
n-Butylbenzene	10.0	9.72	97	66-125	
n-Propylbenzene	10.0	10.6	106	74-121	
o-Xylene	10.0	9.60	96	83-113	
p-Isopropyltoluene	10.0	10.6	106	74-120	
sec-Butylbenzene	10.0	9.88	99	70-117	
Styrene	10.0	9.67	97	79-114	
tert-Butyl alcohol	200	241	121	70-130	
tert-Butylbenzene	10.0	10.4	104	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.83	98	72-116	
1,1,2,2-Tetrachloroethane	10.0	10.3	103	68-118	
Tetrachloroethene	10.0	9.64	96	79-114	
Toluene	10.0	9.73	97	84-111	
trans-1,2-Dichloroethene	10.0	8.70	87	83-117	
trans-1,3-Dichloropropene	10.0	10.2	102	58-117	
1,2,3-Trichlorobenzene	10.0	5.06	51	54-126	*
1,2,4-Trichlorobenzene	10.0	6.26	63	48-135	
1,1,1-Trichloroethane	10.0	9.55	96	74-118	
Trichloroethene	10.0	9.13	91	76-117	
Trichlorofluoromethane	10.0	9.90	99	49-157	
1,2,3-Trichloropropane	10.0	10.6	106	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	10.2	102	74-151	
1,2,3-Trimethylbenzene	10.0	10.5	105	70-130	
1,2,4-Trimethylbenzene	10.0	10.2	102	76-120	
Vinyl acetate	10.0	9.42	94	46-161	
Vinyl chloride	10.0	9.39	94	53-127	
Xylenes, Total	30.0	28.5	95	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4359.D

Lab ID: 240-23884-E-12 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	133	33 U	134	100	33-145	
Benzene	66.7	6.7 U	68.7	103	72-121	
Bromobenzene	66.7	6.7 U	59.0	88	71-116	
Bromochloromethane	66.7	6.7 U	66.0	99	73-121	
Bromodichloromethane	66.7	6.7 U	69.2	104	67-120	
Bromoform	66.7	6.7 U	57.5	86	32-128	
Bromomethane	66.7	6.7 U	74.0	111	10-186	
2-Butanone	133	33 U	109	81	54-129	
Carbon disulfide	66.7	6.7 U	72.2	108	57-147	
Carbon tetrachloride	66.7	6.7 U	77.0	115	59-129	
Chlorobenzene	66.7	6.7 U	69.1	104	80-110	
Chloroethane	66.7	6.7 U	63.7	96	21-165	
2-Chloroethyl vinyl ether	66.7	67 U	67 U	0	10-150	F
Chloroform	66.7	6.7 U	65.8	99	76-118	
Chloromethane	66.7	6.7 U	69.5	104	33-132	
2-Chlorotoluene	66.7	6.7 U	62.9	94	69-117	
4-Chlorotoluene	66.7	6.7 U	65.1	98	71-116	
cis-1,2-Dichloroethene	66.7	6.7 U	68.9	103	70-120	
cis-1,3-Dichloropropene	66.7	6.7 U	61.3	92	51-110	
Dibromochloromethane	66.7	6.7 U	67.0	100	56-118	
1,2-Dibromo-3-Chloropropane	66.7	33 U	53.9	81	32-139	
1,2-Dibromoethane	66.7	6.7 U	67.5	101	74-113	
Dibromomethane	66.7	6.7 U	70.2	105	77-121	
1,2-Dichlorobenzene	66.7	6.7 U	65.6	98	75-111	
1,3-Dichlorobenzene	66.7	6.7 U	64.9	97	73-110	
1,4-Dichlorobenzene	66.7	6.7 U	65.2	98	75-110	
Dichlorodifluoromethane	66.7	6.7 U	57.7	87	17-128	
1,1-Dichloroethane	66.7	6.7 U	78.9	118	79-116	F
1,2-Dichloroethane	66.7	6.7 U	75.8	114	68-129	
1,1-Dichloroethene	66.7	6.7 U	80.0	120	74-135	
1,2-Dichloropropane	66.7	6.7 U	69.6	104	78-115	
1,3-Dichloropropane	66.7	6.7 U	62.9	94	74-118	
2,2-Dichloropropane	66.7	6.7 U	60.6	91	38-127	
1,1-Dichloropropene	66.7	6.7 U	67.8	102	80-114	
Diisopropyl ether	66.7	33 U	76.9	115	73-118	
Ethylbenzene	66.7	6.7 U	69.9	105	75-116	
Hexachlorobutadiene	66.7	6.7 U	50.7	76	27-132	
2-Hexanone	133	33 U	110	83	47-139	
Isopropylbenzene	66.7	6.7 U	68.6	103	68-116	
Methylene Chloride	66.7	6.8	82.5	113	63-128	
4-Methyl-2-pentanone	133	33 U	117	88	56-131	
Methyl tert-butyl ether	66.7	6.7 U	70.4	106	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4359.D

Lab ID: 240-23884-E-12 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	133	13 U	140	105	75-117	
Naphthalene	66.7	6.7 U	44.9	67	15-158	
n-Butylbenzene	66.7	6.7 U	66.7	100	56-127	
n-Propylbenzene	66.7	6.7 U	63.8	96	64-124	
o-Xylene	66.7	6.7 U	65.9	99	76-116	
p-Isopropyltoluene	66.7	6.7 U	67.7	101	64-122	
sec-Butylbenzene	66.7	6.7 U	63.4	95	60-119	
Styrene	66.7	6.7 U	70.4	106	71-117	
tert-Butyl alcohol	1330	130 U	1210	91	70-130	
tert-Butylbenzene	66.7	6.7 U	59.4	89	61-119	
1,1,1,2-Tetrachloroethane	66.7	6.7 U	68.6	103	64-118	
1,1,2,2-Tetrachloroethane	66.7	6.7 U	53.3	80	63-122	
Tetrachloroethene	66.7	92	144	78	70-117	
Toluene	66.7	6.7 U	65.7	98	78-114	
trans-1,2-Dichloroethene	66.7	6.7 U	76.9	115	80-119	
trans-1,3-Dichloropropene	66.7	6.7 U	63.6	95	46-116	
1,2,3-Trichlorobenzene	66.7	6.7 U	38.5	58	45-129	
1,2,4-Trichlorobenzene	66.7	6.7 U	49.1	74	38-138	
1,1,1-Trichloroethane	66.7	6.7 U	70.8	106	68-121	
Trichloroethene	66.7	1.6 J	72.4	106	66-120	
Trichlorofluoromethane	66.7	6.7 U	95.3	143	46-157	
1,2,3-Trichloropropane	66.7	6.7 U	60.1	90	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	66.7	6.7 U	91.6	137	70-152	
1,2,3-Trimethylbenzene	66.7	33 U	70.6	106	70-130	
1,2,4-Trimethylbenzene	66.7	6.7 U	62.3	93	67-124	
Vinyl acetate	66.7	13 U	65.0	97	43-157	
Vinyl chloride	66.7	6.7 U	73.4	110	49-130	
Xylenes, Total	200	13 U	206	103	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4360.D

Lab ID: 240-23884-E-12 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	133	117	88	13	30	33-145	
Benzene	66.7	59.2	89	15	30	72-121	
Bromobenzene	66.7	64.6	97	9	30	71-116	
Bromochloromethane	66.7	61.3	92	7	30	73-121	
Bromodichloromethane	66.7	68.7	103	1	30	67-120	
Bromoform	66.7	55.9	84	3	30	32-128	
Bromomethane	66.7	67.5	101	9	30	10-186	
2-Butanone	133	106	80	2	30	54-129	
Carbon disulfide	66.7	67.4	101	7	30	57-147	
Carbon tetrachloride	66.7	74.0	111	4	30	59-129	
Chlorobenzene	66.7	64.2	96	7	30	80-110	
Chloroethane	66.7	58.9	88	8	30	21-165	
2-Chloroethyl vinyl ether	66.7	67 U	0	NC	30	10-150	F
Chloroform	66.7	65.7	98	0	30	76-118	
Chloromethane	66.7	64.6	97	7	30	33-132	
2-Chlorotoluene	66.7	64.6	97	3	30	69-117	
4-Chlorotoluene	66.7	64.2	96	1	30	71-116	
cis-1,2-Dichloroethene	66.7	63.8	96	8	30	70-120	
cis-1,3-Dichloropropene	66.7	60.1	90	2	30	51-110	
Dibromochloromethane	66.7	61.7	92	8	30	56-118	
1,2-Dibromo-3-Chloropropane	66.7	50.8	76	6	30	32-139	
1,2-Dibromoethane	66.7	63.0	94	7	30	74-113	
Dibromomethane	66.7	64.4	96	9	30	77-121	
1,2-Dichlorobenzene	66.7	62.3	93	5	30	75-111	
1,3-Dichlorobenzene	66.7	63.4	95	2	30	73-110	
1,4-Dichlorobenzene	66.7	62.0	93	5	30	75-110	
Dichlorodifluoromethane	66.7	51.7	77	11	30	17-128	
1,1-Dichloroethane	66.7	63.8	96	21	30	79-116	
1,2-Dichloroethane	66.7	65.3	98	15	30	68-129	
1,1-Dichloroethene	66.7	72.6	109	10	30	74-135	
1,2-Dichloropropane	66.7	64.4	97	8	30	78-115	
1,3-Dichloropropane	66.7	65.2	98	4	30	74-118	
2,2-Dichloropropane	66.7	58.6	88	3	30	38-127	
1,1-Dichloropropene	66.7	64.5	97	5	30	80-114	
Diisopropyl ether	66.7	64.3	96	18	30	73-118	
Ethylbenzene	66.7	64.4	97	8	30	75-116	
Hexachlorobutadiene	66.7	51.9	78	2	30	27-132	
2-Hexanone	133	113	84	2	30	47-139	
Isopropylbenzene	66.7	62.5	94	9	30	68-116	
Methylene Chloride	66.7	75.6	103	9	30	63-128	
4-Methyl-2-pentanone	133	112	84	4	30	56-131	
Methyl tert-butyl ether	66.7	65.3	98	8	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4360.D

Lab ID: 240-23884-E-12 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	133	128	96	9	30	75-117	
Naphthalene	66.7	49.8	75	10	30	15-158	
n-Butylbenzene	66.7	63.6	95	5	30	56-127	
n-Propylbenzene	66.7	66.8	100	5	30	64-124	
o-Xylene	66.7	64.5	97	2	30	76-116	
p-Isopropyltoluene	66.7	66.3	99	2	30	64-122	
sec-Butylbenzene	66.7	64.2	96	1	30	60-119	
Styrene	66.7	66.6	100	6	30	71-117	
tert-Butyl alcohol	1330	1100	82	10	30	70-130	
tert-Butylbenzene	66.7	62.7	94	5	30	61-119	
1,1,1,2-Tetrachloroethane	66.7	64.0	96	7	30	64-118	
1,1,2,2-Tetrachloroethane	66.7	60.6	91	13	30	63-122	
Tetrachloroethene	66.7	143	76	1	30	70-117	
Toluene	66.7	53.2	80	21	30	78-114	
trans-1,2-Dichloroethene	66.7	69.2	104	11	30	80-119	
trans-1,3-Dichloropropene	66.7	51.4	77	21	30	46-116	
1,2,3-Trichlorobenzene	66.7	44.2	66	14	30	45-129	
1,2,4-Trichlorobenzene	66.7	51.7	78	5	30	38-138	
1,1,1-Trichloroethane	66.7	63.6	95	11	30	68-121	
Trichloroethene	66.7	69.0	101	5	30	66-120	
Trichlorofluoromethane	66.7	89.3	134	6	30	46-157	
1,2,3-Trichloropropane	66.7	62.2	93	3	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	66.7	82.1	123	11	30	70-152	
1,2,3-Trimethylbenzene	66.7	67.0	101	5	30	70-130	
1,2,4-Trimethylbenzene	66.7	64.3	96	3	30	67-124	
Vinyl acetate	66.7	56.8	85	13	30	43-157	
Vinyl chloride	66.7	66.5	100	10	30	49-130	
Xylenes, Total	200	193	96	7	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1579.D

Lab ID: 240-23944-H-4 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20.0	5.0 U	17.5	88	33-145	
Benzene	10.0	1.0 U	8.22	82	72-121	
Bromobenzene	10.0	1.0 U	9.09	91	71-116	
Bromochloromethane	10.0	1.0 U	8.01	80	73-121	
Bromodichloromethane	10.0	1.0 U	8.56	86	67-120	
Bromoform	10.0	1.0 U	8.57	86	32-128	
Bromomethane	10.0	1.0 U	7.72	77	10-186	
2-Butanone	20.0	5.0 U	18.8	94	54-129	
Carbon disulfide	10.0	1.0 U	8.67	87	57-147	
Carbon tetrachloride	10.0	1.0 U	8.66	87	59-129	
Chlorobenzene	10.0	1.0 U	8.45	84	80-110	
Chloroethane	10.0	1.0 U	8.75	88	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0	10-150	F
Chloroform	10.0	1.0 U	8.36	84	76-118	
Chloromethane	10.0	1.0 U	6.69	67	33-132	
2-Chlorotoluene	10.0	1.0 U	9.09	91	69-117	
4-Chlorotoluene	10.0	1.0 U	9.10	91	71-116	
cis-1,2-Dichloroethene	10.0	1.0 U	8.61	86	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	7.80	78	51-110	
Dibromochloromethane	10.0	1.0 U	8.85	88	56-118	
1,2-Dibromo-3-Chloropropane	10.0	5.0 U	8.70	87	32-139	
1,2-Dibromoethane	10.0	1.0 U	8.91	89	74-113	
Dibromomethane	10.0	1.0 U	9.31	93	77-121	
1,2-Dichlorobenzene	10.0	1.0 U	8.04	80	75-111	
1,3-Dichlorobenzene	10.0	1.0 U	8.51	85	73-110	
1,4-Dichlorobenzene	10.0	1.0 U	8.50	85	75-110	
Dichlorodifluoromethane	10.0	1.0 U	7.29	73	17-128	
1,1-Dichloroethane	10.0	1.0 U	8.58	86	79-116	
1,2-Dichloroethane	10.0	1.0 U	8.63	86	68-129	
1,1-Dichloroethene	10.0	1.0 U	8.27	83	74-135	
1,2-Dichloropropane	10.0	1.0 U	8.36	84	78-115	
1,3-Dichloropropane	10.0	1.0 U	9.42	94	74-118	
2,2-Dichloropropane	10.0	1.0 U	7.86	79	38-127	
1,1-Dichloropropene	10.0	1.0 U	8.61	86	80-114	
Diisopropyl ether	10.0	5.0 U	8.68	87	73-118	
Ethylbenzene	10.0	1.0 U	8.49	85	75-116	
Hexachlorobutadiene	10.0	1.0 U	5.28	53	27-132	
2-Hexanone	20.0	5.0 U	21.9	110	47-139	
Isopropylbenzene	10.0	1.0 U	8.20	82	68-116	
Methylene Chloride	10.0	1.0 U	6.61	66	63-128	
4-Methyl-2-pentanone	20.0	5.0 U	20.6	103	56-131	
Methyl tert-butyl ether	10.0	1.0 U	8.20	82	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1579.D

Lab ID: 240-23944-H-4 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	2.0 U	17.3	86	75-117	
Naphthalene	10.0	1.0 U	4.51	45	15-158	
n-Butylbenzene	10.0	1.0 U	8.00	80	56-127	
n-Propylbenzene	10.0	1.0 U	9.10	91	64-124	
o-Xylene	10.0	1.0 U	8.72	87	76-116	
p-Isopropyltoluene	10.0	1.0 U	8.89	89	64-122	
sec-Butylbenzene	10.0	1.0 U	8.75	87	60-119	
Styrene	10.0	1.0 U	8.77	88	71-117	
tert-Butyl alcohol	200	20 U	197	99	70-130	
tert-Butylbenzene	10.0	1.0 U	8.29	83	61-119	
1,1,1,2-Tetrachloroethane	10.0	1.0 U	8.87	89	64-118	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.55	96	63-122	
Tetrachloroethene	10.0	1.0 U	8.86	89	70-117	
Toluene	10.0	1.0 U	8.56	86	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	8.04	80	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	9.17	92	46-116	
1,2,3-Trichlorobenzene	10.0	1.0 U	4.87	49	45-129	
1,2,4-Trichlorobenzene	10.0	1.0 U	5.19	52	38-138	
1,1,1-Trichloroethane	10.0	1.0 U	8.27	83	68-121	
Trichloroethene	10.0	1.0 U	8.99	90	66-120	
Trichlorofluoromethane	10.0	1.0 U	8.85	89	46-157	
1,2,3-Trichloropropane	10.0	1.0 U	10.4	104	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	9.94	99	70-152	
1,2,3-Trimethylbenzene	10.0	5.0 U	8.89	89	70-130	
1,2,4-Trimethylbenzene	10.0	1.0 U	8.80	88	67-124	
Vinyl acetate	10.0	2.0 U	9.52	95	43-157	
Vinyl chloride	10.0	1.0 U	8.95	89	49-130	
Xylenes, Total	30.0	2.0 U	26.0	87	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1580.D

Lab ID: 240-23944-E-4 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	20.0	16.5	83	6	30	33-145	
Benzene	10.0	8.51	85	3	30	72-121	
Bromobenzene	10.0	9.35	94	3	30	71-116	
Bromochloromethane	10.0	8.24	82	3	30	73-121	
Bromodichloromethane	10.0	8.65	86	1	30	67-120	
Bromoform	10.0	9.32	93	8	30	32-128	
Bromomethane	10.0	8.34	83	8	30	10-186	
2-Butanone	20.0	17.8	89	6	30	54-129	
Carbon disulfide	10.0	9.18	92	6	30	57-147	
Carbon tetrachloride	10.0	8.90	89	3	30	59-129	
Chlorobenzene	10.0	8.84	88	5	30	80-110	
Chloroethane	10.0	9.69	97	10	30	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
Chloroform	10.0	8.34	83	0	30	76-118	
Chloromethane	10.0	7.31	73	9	30	33-132	
2-Chlorotoluene	10.0	9.23	92	2	30	69-117	
4-Chlorotoluene	10.0	9.30	93	2	30	71-116	
cis-1,2-Dichloroethene	10.0	8.76	88	2	30	70-120	
cis-1,3-Dichloropropene	10.0	8.12	81	4	30	51-110	
Dibromochloromethane	10.0	9.26	93	5	30	56-118	
1,2-Dibromo-3-Chloropropane	10.0	9.64	96	10	30	32-139	
1,2-Dibromoethane	10.0	9.01	90	1	30	74-113	
Dibromomethane	10.0	9.21	92	1	30	77-121	
1,2-Dichlorobenzene	10.0	8.45	85	5	30	75-111	
1,3-Dichlorobenzene	10.0	8.42	84	1	30	73-110	
1,4-Dichlorobenzene	10.0	8.42	84	1	30	75-110	
Dichlorodifluoromethane	10.0	7.78	78	6	30	17-128	
1,1-Dichloroethane	10.0	8.85	88	3	30	79-116	
1,2-Dichloroethane	10.0	8.91	89	3	30	68-129	
1,1-Dichloroethene	10.0	8.40	84	2	30	74-135	
1,2-Dichloropropane	10.0	8.84	88	6	30	78-115	
1,3-Dichloropropane	10.0	9.14	91	3	30	74-118	
2,2-Dichloropropane	10.0	8.11	81	3	30	38-127	
1,1-Dichloropropene	10.0	8.84	88	3	30	80-114	
Diisopropyl ether	10.0	8.95	90	3	30	73-118	
Ethylbenzene	10.0	8.86	89	4	30	75-116	
Hexachlorobutadiene	10.0	6.62	66	22	30	27-132	
2-Hexanone	20.0	21.4	107	2	30	47-139	
Isopropylbenzene	10.0	8.92	89	8	30	68-116	
Methylene Chloride	10.0	7.04	70	6	30	63-128	
4-Methyl-2-pentanone	20.0	21.1	105	2	30	56-131	
Methyl tert-butyl ether	10.0	8.55	85	4	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1580.D

Lab ID: 240-23944-E-4 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	17.9	89	4	30	75-117	
Naphthalene	10.0	6.38	64	34	30	15-158	F
n-Butylbenzene	10.0	8.34	83	4	30	56-127	
n-Propylbenzene	10.0	9.62	96	6	30	64-124	
o-Xylene	10.0	9.59	96	10	30	76-116	
p-Isopropyltoluene	10.0	8.92	89	0	30	64-122	
sec-Butylbenzene	10.0	8.40	84	4	30	60-119	
Styrene	10.0	9.20	92	5	30	71-117	
tert-Butyl alcohol	200	156	78	24	30	70-130	
tert-Butylbenzene	10.0	8.90	89	7	30	61-119	
1,1,1,2-Tetrachloroethane	10.0	9.24	92	4	30	64-118	
1,1,2,2-Tetrachloroethane	10.0	9.90	99	4	30	63-122	
Tetrachloroethene	10.0	8.90	89	1	30	70-117	
Toluene	10.0	8.86	89	3	30	78-114	
trans-1,2-Dichloroethene	10.0	8.33	83	4	30	80-119	
trans-1,3-Dichloropropene	10.0	9.26	93	1	30	46-116	
1,2,3-Trichlorobenzene	10.0	5.82	58	18	30	45-129	
1,2,4-Trichlorobenzene	10.0	6.62	66	24	30	38-138	
1,1,1-Trichloroethane	10.0	8.61	86	4	30	68-121	
Trichloroethene	10.0	8.78	88	2	30	66-120	
Trichlorofluoromethane	10.0	9.25	92	4	30	46-157	
1,2,3-Trichloropropane	10.0	10.1	101	3	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	10.2	102	3	30	70-152	
1,2,3-Trimethylbenzene	10.0	9.26	93	4	30	70-130	
1,2,4-Trimethylbenzene	10.0	9.03	90	3	30	67-124	
Vinyl acetate	10.0	8.24	82	14	30	43-157	
Vinyl chloride	10.0	8.94	89	0	30	49-130	
Xylenes, Total	30.0	27.5	92	6	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-043013	240-23844-1	90	76	77	69
MRC-MW100A-043013	240-23844-2	87	86	95	86
MRC-MW100B-043013	240-23844-3	96	98	96	92
MRC-OF07-043013	240-23844-4	94	80	78	70
MRC-MW-94D-043013	240-23844-5	94	80	75	67
MRC-MW-93D-043013	240-23844-6	93	80	77	67
	MB 240-85318/6	93	78	77	70
	MB 240-85645/5	109	89	98	88
	MB 240-85803/5	87	86	96	85
	LCS 240-85318/4	94	75	87	86
	LCS 240-85645/4	99	96	98	99
	LCS 240-85803/4	87	85	95	91
	240-23884-E-12 MS	103	103	97	95
	240-23944-H-4 MS	87	89	93	91
	240-23884-E-12 MSD	91	91	81	96
	240-23944-E-4 MSD	89	84	93	99

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: STD8260 240-84966/4 Date Analyzed: 05/07/2013 11:53

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ1363.D Heated Purge: (Y/N) N

Calibration ID: 15041

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1341609	5.10	790643	7.77	258451	10.00
UPPER LIMIT		2683218	5.60	1581286	8.27	516902	10.50
LOWER LIMIT		670805	4.60	395322	7.27	129226	9.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVIS 240-85803/2		1573790	5.10	870720	7.77	258553	10.00

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCVIS 240-85803/2 Date Analyzed: 05/14/2013 10:01

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ1559.D Heated Purge: (Y/N) N

Calibration ID: 15043

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1573790	5.10	870720	7.77	258553	10.00
UPPER LIMIT		3147580	5.60	1741440	8.27	517106	10.50
LOWER LIMIT		786895	4.60	435360	7.27	129277	9.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-85803/3		1501923	5.10	745899	7.77	218766	10.00
LCS 240-85803/4		1418290	5.10	782252	7.77	226258	10.00
MB 240-85803/5		1337374	5.10	694650	7.77	194108	10.00
240-23844-2	MRC-MW100A-043013	1328765	5.10	702291	7.77	189564	10.00
240-23944-H-4 MS		1388779	5.10	763502	7.77	220533	10.00
240-23944-E-4 MSD		1389833	5.10	769196	7.77	238679	10.00

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: STD8260 240-74618/4 Date Analyzed: 02/07/2013 14:12

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6220.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2086115	5.70	1321775	8.39	620128	10.64
UPPER LIMIT		4172230	6.20	2643550	8.89	1240256	11.14
LOWER LIMIT		1043058	5.20	660888	7.89	310064	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-74618/8		1919196	5.70	1214489	8.39	624981	10.64
CCVIS 240-85318/2		2115176	5.70	1554196	8.39	839148	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCVIS 240-85318/2 Date Analyzed: 05/09/2013 12:35

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM7869.D Heated Purge: (Y/N) N

Calibration ID: 13620

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2115176	5.70	1554196	8.39	839148	10.64
UPPER LIMIT		4230352	6.20	3108392	8.89	1678296	11.14
LOWER LIMIT		1057588	5.20	777098	7.89	419574	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-85318/3		2081231	5.70	1453840	8.39	664492	10.64
LCS 240-85318/4		1921467	5.70	1386446	8.39	735961	10.64
MB 240-85318/6		1827750	5.70	1353001	8.39	616397	10.64
240-23844-1	TB-043013	1883197	5.70	1408349	8.39	629213	10.64
240-23844-4	MRC-OF07-043013	1804659	5.70	1332899	8.39	586007	10.64
240-23844-5	MRC-MW-94D-043013	1769172	5.70	1300821	8.41	562644	10.64
240-23844-6	MRC-MW-93D-043013	1762657	5.70	1310296	8.39	556444	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4
Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCVIS 240-85645/2 Date Analyzed: 05/13/2013 10:30

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXR4334.D Heated Purge: (Y/N) N

Calibration ID: 15038

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1590219	5.76	1315808	8.48	722713	10.72
UPPER LIMIT		3180438	6.26	2631616	8.98	1445426	11.22
LOWER LIMIT		795110	5.26	657904	7.98	361357	10.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-85645/3		1463639	5.76	1194991	8.48	617684	10.72
LCS 240-85645/4		1536556	5.76	1312865	8.48	719003	10.72
MB 240-85645/5		1200109	5.76	1142648	8.48	566111	10.72
240-23844-3	MRC-MW100B-043013	1467504	5.76	1233464	8.48	622789	10.72
240-23884-E-12 MS		1242614	5.76	1061702	8.48	648848	10.72
240-23884-E-12 MSD		1352689	5.76	1251497	8.48	687038	10.72

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

Method 8270D

Semivolatile Organic Compounds (GC/MS) by Method 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: 30501001.D DFTPP Injection Date: 05/01/2013

Instrument ID: A4HP7 DFTPP Injection Time: 14:06

Analysis Batch No.: 84325

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.7	
68	Less than 2.0% of mass 69	0.5	(1.2)1
69	Mass 69 relative abundance	44.4	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	49.6	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	21.1	
365	Greater than 0.75% of mass 198	2.3	
441	Present, but less than mass 443	8.8	
442	40.0 - 110.0% of mass 198	60.6	
443	15.0 - 24.0% of mass 442	10.7	(17.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-84325/2	30501002.D	05/01/2013	14:33
	STD4 240-84325/3	30501003.D	05/01/2013	14:59
	STD3 240-84325/4	30501004.D	05/01/2013	15:26
	STD2 240-84325/5	30501005.D	05/01/2013	15:53
	STD1 240-84325/6	30501006.D	05/01/2013	16:20
	STD9 240-84325/7	30501007.D	05/01/2013	16:46
	STD8 240-84325/8	30501008.D	05/01/2013	17:13
	STD7 240-84325/9	30501009.D	05/01/2013	17:40
	STD6 240-84325/10	30501010.D	05/01/2013	18:07
	ICV 240-84325/11	30501011.D	05/01/2013	18:33

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84325

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/01/2013 14:33 Calibration End Date: 05/01/2013 18:07 Calibration ID: 14918

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84325/6	30501006.D
Level 2	STD2 240-84325/5	30501005.D
Level 3	STD3 240-84325/4	30501004.D
Level 4	STD4 240-84325/3	30501003.D
Level 5	STD5 240-84325/2	30501002.D
Level 6	STD6 240-84325/10	30501010.D
Level 7	STD7 240-84325/9	30501009.D
Level 8	STD8 240-84325/8	30501008.D
Level 9	STD9 240-84325/7	30501007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5318	0.5880 0.5394	0.5502 0.5872	0.5213 0.6030	0.5091	Ave		0.5537				6.3		20.0			
N-Nitrosodimethylamine	0.8974	0.7477 0.8955	0.8230 0.9781	0.7926 0.9669	0.8457	Ave		0.8684				9.4		20.0			
Pyridine	1.5582	1.2634 1.5762	1.3399 1.7197	1.4644 1.6674	1.5202	Ave		1.5137				10.0		20.0			
Benzaldehyde	1.4895 1.2675	1.2612 1.2301	1.3552 1.2759	1.3323 1.1304	1.3015	Ave		1.2937			0.0100	7.6		20.0			
Phenol	1.7394	1.7499 1.7086	1.7851 1.8067	1.7667 1.7363	1.7409	Ave		1.7542			0.8000	1.8		20.0			
Aniline	2.4199	2.1443 2.3565	2.3268 2.5465	2.2548 2.4320	2.3549	Ave		2.3545				5.1		20.0			
Bis(2-chloroethyl)ether	1.6038	1.6483 1.5942	1.6778 1.7553	1.6672 1.7548	1.5815	Ave		1.6604			0.7000	4.1		20.0			
2-Chlorophenol	1.2693	1.2476 1.2526	1.2750 1.3393	1.2542 1.2736	1.2636	Ave		1.2719			0.8000	2.3		20.0			
1,3-Dichlorobenzene	1.3588	1.2946 1.3579	1.3612 1.4513	1.3381 1.3992	1.3351	Ave		1.3620				3.4		20.0			
1,4-Dichlorobenzene	1.3845	1.3527 1.3857	1.3862 1.4786	1.3845 1.4417	1.3680	Ave		1.3977				3.0		20.0			
Benzyl alcohol	0.9046	0.8257 0.8890	0.8835 0.9581	0.8718 0.9449	0.8925	Ave		0.8963				4.6		20.0			
1,2-Dichlorobenzene	1.2789	1.2615 1.2721	1.3209 1.3601	1.2852 1.3047	1.2931	Ave		1.2971				2.4		20.0			
2-Methylphenol	1.2158	1.2003 1.2060	1.2565 1.2761	1.2167 1.2424	1.2371	Ave		1.2314			0.7000	2.1		20.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICV 240-84325/11 Calibration Date: 05/01/2013 18:33

Instrument ID: A4HP7 Calib Start Date: 05/01/2013 14:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/01/2013 18:07

Lab File ID: 30501011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5537	0.5433		9.81	10.0	-1.9	30.0
N-Nitrosodimethylamine	Ave	0.8684	0.8673		9.99	10.0	-0.1	30.0
Pyridine	Ave	1.514	1.644		10.9	10.0	8.6	30.0
Benzaldehyde	Ave	1.294	1.287	0.0100	19.9	20.0	-0.5	30.0
Phenol	Ave	1.754	1.749	0.8000	9.97	10.0	-0.3	30.0
Aniline	Ave	2.354	2.399		10.2	10.0	1.9	30.0
Bis(2-chloroethyl)ether	Ave	1.660	1.578	0.7000	9.50	10.0	-5.0	30.0
2-Chlorophenol	Ave	1.272	1.270	0.8000	9.98	10.0	-0.2	30.0
1,3-Dichlorobenzene	Ave	1.362	1.344		9.87	10.0	-1.3	30.0
1,4-Dichlorobenzene	Ave	1.398	1.387		9.92	10.0	-0.8	30.0
Benzyl alcohol	Ave	0.8963	0.9100		10.2	10.0	1.5	30.0
1,2-Dichlorobenzene	Ave	1.297	1.278		9.86	10.0	-1.4	30.0
2-Methylphenol	Ave	1.231	1.231	0.7000	10.0	10.0	-0.0	30.0
bis (2-chloroisopropyl) ether	Ave	2.576	2.776		7.76	7.20	7.8	30.0
Indene	Ave	2.322	2.374		20.4	20.0	2.2	30.0
3 & 4 Methylphenol	Ave	1.293	1.309		10.1	10.0	1.2	30.0
N-Nitrosodi-n-propylamine	Ave	1.021	1.015	0.5000	9.93	10.0	-0.7	30.0
Acetophenone	Ave	1.994	1.971	0.0100	9.88	10.0	-1.2	30.0
Hexachloroethane	Ave	0.5644	0.5622	0.3000	9.96	10.0	-0.4	30.0
Nitrobenzene	Ave	0.4059	0.4147	0.2000	10.2	10.0	2.2	30.0
Isophorone	Ave	0.6969	0.7346	0.4000	10.5	10.0	5.4	30.0
2,4-Dimethylphenol	Ave	0.3146	0.3051	0.2000	9.70	10.0	-3.0	30.0
2-Nitrophenol	Ave	0.1556	0.1591	0.1000	10.2	10.0	2.3	30.0
Benzoic acid	Linl		0.1905		20.8	20.0	4.2	30.0
Bis(2-chloroethoxy)methane	Ave	0.4240	0.4153	0.3000	9.79	10.0	-2.1	30.0
2,4-Dichlorophenol	Ave	0.2544	0.2539	0.2000	9.98	10.0	-0.2	30.0
1,2,4-Trichlorobenzene	Ave	0.2609	0.2629		10.1	10.0	0.8	30.0
Naphthalene	Ave	0.9392	0.9527	0.7000	10.1	10.0	1.4	30.0
4-Chloroaniline	Ave	0.4242	0.4183	0.0100	9.86	10.0	-1.4	30.0
Hexachlorobutadiene	Ave	0.1452	0.1458	0.0100	10.0	10.0	0.4	30.0
Caprolactam	Ave	0.0932	0.0991	0.0100	21.3	20.0	6.4	30.0
4-Chloro-3-methylphenol	Ave	0.2794	0.2880	0.2000	10.3	10.0	3.1	30.0
2-Methylnaphthalene	Ave	0.6254	0.5995	0.4000	9.58	10.0	-4.2	30.0
1-Methylnaphthalene	Ave	0.5802	0.5652		9.74	10.0	-2.6	30.0
Hexachlorocyclopentadiene	Ave	0.2612	0.2712	0.0500	10.4	10.0	3.8	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4338	0.4451	0.0100	10.3	10.0	2.6	30.0
2,4,6-Trichlorophenol	Ave	0.3001	0.3093	0.2000	10.3	10.0	3.1	30.0
2,4,5-Trichlorophenol	Ave	0.3117	0.3255	0.2000	10.4	10.0	4.4	30.0
1,1'-Biphenyl	Ave	1.255	1.268	0.0100	10.1	10.0	1.0	30.0
2-Chloronaphthalene	Ave	0.9786	0.9929	0.8000	10.1	10.0	1.5	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: 30508001.D DFTPP Injection Date: 05/08/2013

Instrument ID: A4HP7 DFTPP Injection Time: 09:33

Analysis Batch No.: 85124

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	48.7	
68	Less than 2.0% of mass 69	0.5	(1.1)1
69	Mass 69 relative abundance	44.5	
70	Less than 2.0% of mass 69	0.1	(0.2)1
127	25.0 - 75.0% of mass 198	49.9	
197	Less than 1.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	21.0	
365	Greater than 0.75% of mass 198	2.3	
441	Present, but less than mass 443	8.7	
442	40.0 - 110.0% of mass 198	58.6	
443	15.0 - 24.0% of mass 442	10.9	(18.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-85124/2	30508002.D	05/08/2013	10:00
	MB 240-84776/19-A	30508008.D	05/08/2013	12:33
	LCS 240-84776/20-A	30508009.D	05/08/2013	13:00
MRC-MW100A-043013	240-23844-2	30508026.D	05/08/2013	20:26
MRC-MW100B-043013	240-23844-3	30508027.D	05/08/2013	20:53
MRC-OF07-043013	240-23844-4	30508028.D	05/08/2013	21:19

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCV 240-85124/2 Calibration Date: 05/08/2013 10:00

Instrument ID: A4HP7 Calib Start Date: 05/01/2013 14:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/01/2013 18:07

Lab File ID: 30508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5537	0.5366		9.69	10.0	-3.1	20.0
N-Nitrosodimethylamine	Ave	0.8684	0.8914		10.3	10.0	2.7	20.0
Pyridine	Ave	1.514	1.601		10.6	10.0	5.8	20.0
Benzaldehyde	Ave	1.294	1.275	0.0100	19.7	20.0	-1.5	20.0
Phenol	Ave	1.754	1.755	0.8000	10.0	10.0	0.0	20.0
Aniline	Ave	2.354	2.330		9.90	10.0	-1.0	20.0
Bis(2-chloroethyl)ether	Ave	1.660	1.567	0.7000	9.44	10.0	-5.6	20.0
2-Chlorophenol	Ave	1.272	1.259	0.8000	9.90	10.0	-1.0	20.0
1,3-Dichlorobenzene	Ave	1.362	1.349		9.91	10.0	-0.9	20.0
1,4-Dichlorobenzene	Ave	1.398	1.371		9.81	10.0	-1.9	20.0
Benzyl alcohol	Ave	0.8963	0.8867		9.89	10.0	-1.1	20.0
1,2-Dichlorobenzene	Ave	1.297	1.298		10.0	10.0	0.0	20.0
2-Methylphenol	Ave	1.231	1.198	0.7000	9.73	10.0	-2.7	20.0
bis (2-chloroisopropyl) ether	Ave	2.576	2.548		9.89	10.0	-1.1	20.0
Indene	Ave	2.322	2.372		20.4	20.0	2.1	20.0
3 & 4 Methylphenol	Ave	1.293	1.282		9.92	10.0	-0.8	20.0
N-Nitrosodi-n-propylamine	Ave	1.021	0.9900	0.5000	9.69	10.0	-3.1	20.0
Acetophenone	Ave	1.994	1.949	0.0100	9.77	10.0	-2.3	20.0
Hexachloroethane	Ave	0.5644	0.5554	0.3000	9.84	10.0	-1.6	20.0
Nitrobenzene	Ave	0.4059	0.4047	0.2000	9.97	10.0	-0.3	20.0
Isophorone	Ave	0.6969	0.6728	0.4000	9.65	10.0	-3.5	20.0
2,4-Dimethylphenol	Ave	0.3146	0.3055	0.2000	9.71	10.0	-2.9	20.0
2-Nitrophenol	Ave	0.1556	0.1600	0.1000	10.3	10.0	2.9	20.0
Benzoic acid	Lin1		0.1570		17.6	20.0	-11.9	20.0
Bis(2-chloroethoxy)methane	Ave	0.4240	0.4078	0.3000	9.62	10.0	-3.8	20.0
2,4-Dichlorophenol	Ave	0.2544	0.2515	0.2000	9.88	10.0	-1.2	20.0
1,2,4-Trichlorobenzene	Ave	0.2609	0.2589		9.92	10.0	-0.8	20.0
Naphthalene	Ave	0.9392	0.9386	0.7000	9.99	10.0	-0.0	20.0
4-Chloroaniline	Ave	0.4242	0.4106	0.0100	9.68	10.0	-3.2	20.0
Hexachlorobutadiene	Ave	0.1452	0.1433	0.0100	9.87	10.0	-1.3	20.0
Caprolactam	Ave	0.0932	0.0959	0.0100	20.6	20.0	2.8	20.0
4-Chloro-3-methylphenol	Ave	0.2794	0.2798	0.2000	10.0	10.0	0.1	20.0
2-Methylnaphthalene	Ave	0.6254	0.5906	0.4000	9.44	10.0	-5.6	20.0
1-Methylnaphthalene	Ave	0.5802	0.5522		9.52	10.0	-4.8	20.0
Hexachlorocyclopentadiene	Ave	0.2612	0.2775	0.0500	10.6	10.0	6.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4338	0.4465	0.0100	10.3	10.0	2.9	20.0
2,4,6-Trichlorophenol	Ave	0.3001	0.3032	0.2000	10.1	10.0	1.0	20.0
2,4,5-Trichlorophenol	Ave	0.3117	0.3207	0.2000	10.3	10.0	2.9	20.0
1,1'-Biphenyl	Ave	1.255	1.229	0.0100	9.79	10.0	-2.1	20.0
2-Chloronaphthalene	Ave	0.9786	0.9808	0.8000	10.0	10.0	0.2	20.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: 30509001.D DFTPP Injection Date: 05/09/2013

Instrument ID: A4HP7 DFTPP Injection Time: 09:30

Analysis Batch No.: 85347

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	49.8	
68	Less than 2.0% of mass 69	0.5	(1.2)1
69	Mass 69 relative abundance	46.0	
70	Less than 2.0% of mass 69	0.1	(0.2)1
127	25.0 - 75.0% of mass 198	50.7	
197	Less than 1.0% of mass 198	0.3	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	21.9	
365	Greater than 0.75% of mass 198	2.4	
441	Present, but less than mass 443	9.0	
442	40.0 - 110.0% of mass 198	60.4	
443	15.0 - 24.0% of mass 442	10.5	(17.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-85347/2	30509002.D	05/09/2013	09:56
MRC-MW-93D-043013	240-23844-6	30509025.D	05/09/2013	18:40

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCV 240-85347/2 Calibration Date: 05/09/2013 09:56

Instrument ID: A4HP7 Calib Start Date: 05/01/2013 14:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/01/2013 18:07

Lab File ID: 30509002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5537	0.5532		9.99	10.0	-0.0	20.0
N-Nitrosodimethylamine	Ave	0.8684	0.8940		10.3	10.0	3.0	20.0
Pyridine	Ave	1.514	1.559		10.3	10.0	3.0	20.0
Benzaldehyde	Ave	1.294	1.215	0.0100	18.8	20.0	-6.1	20.0
Phenol	Ave	1.754	1.713	0.8000	9.76	10.0	-2.4	20.0
Aniline	Ave	2.354	2.213		9.40	10.0	-6.0	20.0
Bis(2-chloroethyl)ether	Ave	1.660	1.581	0.7000	9.52	10.0	-4.8	20.0
2-Chlorophenol	Ave	1.272	1.237	0.8000	9.73	10.0	-2.7	20.0
1,3-Dichlorobenzene	Ave	1.362	1.323		9.71	10.0	-2.9	20.0
1,4-Dichlorobenzene	Ave	1.398	1.346		9.63	10.0	-3.7	20.0
Benzyl alcohol	Ave	0.8963	0.8695		9.70	10.0	-3.0	20.0
1,2-Dichlorobenzene	Ave	1.297	1.265		9.75	10.0	-2.5	20.0
2-Methylphenol	Ave	1.231	1.197	0.7000	9.72	10.0	-2.8	20.0
bis (2-chloroisopropyl) ether	Ave	2.576	2.458		9.54	10.0	-4.6	20.0
Indene	Ave	2.322	2.288		19.7	20.0	-1.5	20.0
3 & 4 Methylphenol	Ave	1.293	1.247		9.65	10.0	-3.5	20.0
N-Nitrosodi-n-propylamine	Ave	1.021	0.9592	0.5000	9.39	10.0	-6.1	20.0
Acetophenone	Ave	1.994	1.903	0.0100	9.54	10.0	-4.6	20.0
Hexachloroethane	Ave	0.5644	0.5501	0.3000	9.75	10.0	-2.5	20.0
Nitrobenzene	Ave	0.4059	0.4048	0.2000	9.97	10.0	-0.3	20.0
Isophorone	Ave	0.6969	0.6801	0.4000	9.76	10.0	-2.4	20.0
2,4-Dimethylphenol	Ave	0.3146	0.3089	0.2000	9.82	10.0	-1.8	20.0
2-Nitrophenol	Ave	0.1556	0.1603	0.1000	10.3	10.0	3.1	20.0
Benzoic acid	Lin1		0.1454		16.5	20.0	-17.5	20.0
Bis(2-chloroethoxy)methane	Ave	0.4240	0.4167	0.3000	9.83	10.0	-1.7	20.0
2,4-Dichlorophenol	Ave	0.2544	0.2570	0.2000	10.1	10.0	1.0	20.0
1,2,4-Trichlorobenzene	Ave	0.2609	0.2626		10.1	10.0	0.7	20.0
Naphthalene	Ave	0.9392	0.9365	0.7000	9.97	10.0	-0.3	20.0
4-Chloroaniline	Ave	0.4242	0.4288	0.0100	10.1	10.0	1.1	20.0
Hexachlorobutadiene	Ave	0.1452	0.1468	0.0100	10.1	10.0	1.1	20.0
Caprolactam	Ave	0.0932	0.0985	0.0100	21.1	20.0	5.6	20.0
4-Chloro-3-methylphenol	Ave	0.2794	0.2822	0.2000	10.1	10.0	1.0	20.0
2-Methylnaphthalene	Ave	0.6254	0.5988	0.4000	9.57	10.0	-4.3	20.0
1-Methylnaphthalene	Ave	0.5802	0.5611		9.67	10.0	-3.3	20.0
Hexachlorocyclopentadiene	Ave	0.2612	0.2759	0.0500	10.6	10.0	5.6	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4338	0.4296	0.0100	9.90	10.0	-1.0	20.0
2,4,6-Trichlorophenol	Ave	0.3001	0.2938	0.2000	9.79	10.0	-2.1	20.0
2,4,5-Trichlorophenol	Ave	0.3117	0.3118	0.2000	10.0	10.0	0.0	20.0
1,1'-Biphenyl	Ave	1.255	1.214	0.0100	9.67	10.0	-3.3	20.0
2-Chloronaphthalene	Ave	0.9786	0.9527	0.8000	9.74	10.0	-2.6	20.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: 30521001.D DFTPP Injection Date: 05/21/2013

Instrument ID: A4HP7 DFTPP Injection Time: 09:52

Analysis Batch No.: 86786

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	57.1	
68	Less than 2.0% of mass 69	0.8	(1.7)1
69	Mass 69 relative abundance	47.7	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	52.4	
197	Less than 1.0% of mass 198	0.5	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	21.0	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	7.3	
442	40.0 - 110.0% of mass 198	48.9	
443	15.0 - 24.0% of mass 442	8.9	(18.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-86786/2	30521002.D	05/21/2013	10:14
MRC-MW-94D-043013	240-23844-5	30521034.D	05/21/2013	13:21

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCV 240-86786/2 Calibration Date: 05/21/2013 10:14

Instrument ID: A4HP7 Calib Start Date: 05/01/2013 14:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/01/2013 18:07

Lab File ID: 30521002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5537	0.5712		10.3	10.0	3.2	20.0
N-Nitrosodimethylamine	Ave	0.8684	0.9232		10.6	10.0	6.3	20.0
Pyridine	Ave	1.514	1.587		10.5	10.0	4.8	20.0
Benzaldehyde	Ave	1.294	1.276	0.0100	19.7	20.0	-1.4	20.0
Phenol	Ave	1.754	1.740	0.8000	9.92	10.0	-0.8	20.0
Aniline	Ave	2.354	2.253		9.57	10.0	-4.3	20.0
Bis(2-chloroethyl)ether	Ave	1.660	1.572	0.7000	9.47	10.0	-5.3	20.0
2-Chlorophenol	Ave	1.272	1.265	0.8000	9.95	10.0	-0.5	20.0
1,3-Dichlorobenzene	Ave	1.362	1.338		9.82	10.0	-1.8	20.0
1,4-Dichlorobenzene	Ave	1.398	1.361		9.74	10.0	-2.6	20.0
Benzyl alcohol	Ave	0.8963	0.7690		8.58	10.0	-14.2	20.0
1,2-Dichlorobenzene	Ave	1.297	1.297		10.0	10.0	-0.0	20.0
2-Methylphenol	Ave	1.231	1.206	0.7000	9.79	10.0	-2.1	20.0
bis (2-chloroisopropyl) ether	Ave	2.576	2.702		10.5	10.0	4.9	20.0
Indene	Ave	2.322	2.352		20.3	20.0	1.3	20.0
3 & 4 Methylphenol	Ave	1.293	1.229		9.51	10.0	-4.9	20.0
N-Nitrosodi-n-propylamine	Ave	1.021	1.034	0.5000	10.1	10.0	1.2	20.0
Acetophenone	Ave	1.994	1.931	0.0100	9.69	10.0	-3.1	20.0
Hexachloroethane	Ave	0.5644	0.5743	0.3000	10.2	10.0	1.7	20.0
Nitrobenzene	Ave	0.4059	0.4248	0.2000	10.5	10.0	4.7	20.0
Isophorone	Ave	0.6969	0.7043	0.4000	10.1	10.0	1.1	20.0
2,4-Dimethylphenol	Ave	0.3146	0.3079	0.2000	9.79	10.0	-2.1	20.0
2-Nitrophenol	Ave	0.1556	0.1617	0.1000	10.4	10.0	3.9	20.0
Benzoic acid	Lin1		0.1737		19.2	20.0	-3.9	20.0
Bis(2-chloroethoxy)methane	Ave	0.4240	0.4182	0.3000	9.86	10.0	-1.4	20.0
2,4-Dichlorophenol	Ave	0.2544	0.2547	0.2000	10.0	10.0	0.0	20.0
1,2,4-Trichlorobenzene	Ave	0.2609	0.2685		10.3	10.0	2.9	20.0
Naphthalene	Ave	0.9392	0.9452	0.7000	10.1	10.0	0.6	20.0
4-Chloroaniline	Ave	0.4242	0.4056	0.0100	9.56	10.0	-4.4	20.0
Hexachlorobutadiene	Ave	0.1452	0.1512	0.0100	10.4	10.0	4.1	20.0
Caprolactam	Ave	0.0932	0.0971	0.0100	20.8	20.0	4.1	20.0
4-Chloro-3-methylphenol	Ave	0.2794	0.2886	0.2000	10.3	10.0	3.3	20.0
2-Methylnaphthalene	Ave	0.6254	0.6093	0.4000	9.74	10.0	-2.6	20.0
1-Methylnaphthalene	Ave	0.5802	0.5704		9.83	10.0	-1.7	20.0
Hexachlorocyclopentadiene	Ave	0.2612	0.1795	0.0500	6.87	10.0	-31.3*	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4338	0.4162	0.0100	9.59	10.0	-4.1	20.0
2,4,6-Trichlorophenol	Ave	0.3001	0.2929	0.2000	9.76	10.0	-2.4	20.0
2,4,5-Trichlorophenol	Ave	0.3117	0.3115	0.2000	9.99	10.0	-0.0	20.0
1,1'-Biphenyl	Ave	1.255	1.177	0.0100	9.38	10.0	-6.2	20.0
2-Chloronaphthalene	Ave	0.9786	0.9551	0.8000	9.76	10.0	-2.4	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab File ID: 30508008.D Lab Sample ID: MB 240-84776/19-A

Matrix: Water Date Extracted: 05/06/2013 09:30

Instrument ID: A4HP7 Date Analyzed: 05/08/2013 12:33

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-84776/20-A	30508009.D	05/08/2013 13:00
MRC-MW100A-043013	240-23844-2	30508026.D	05/08/2013 20:26
MRC-MW100B-043013	240-23844-3	30508027.D	05/08/2013 20:53
MRC-OF07-043013	240-23844-4	30508028.D	05/08/2013 21:19
MRC-MW-93D-043013	240-23844-6	30509025.D	05/09/2013 18:40
MRC-MW-94D-043013	240-23844-5	30521034.D	05/21/2013 13:21

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-84776/19-A

Matrix: Water | Lab File ID: 30508008.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 1000(mL) | Date Analyzed: 05/08/2013 12:33

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85124 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	67		20-110
367-12-4	2-Fluorophenol (Surr)	69		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	78		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	65		21-110
4165-62-2	Phenol-d5 (Surr)	72		21-110
1718-51-0	Terphenyl-d14 (Surr)	56		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30508009.D

Lab ID: LCS 240-84776/20-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	15.8	79	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW100A-043013	240-23844-2	78	81	76	76	96	57
MRC-MW100B-043013	240-23844-3	47	51	46	47	70	45
MRC-OF07-043013	240-23844-4	65	68	61	62	78	48
MRC-MW-94D-043013	240-23844-5	61	63	58	57	63	45
MRC-MW-93D-043013	240-23844-6	18	28	29	29	36	19 X
	MB 240-84776/19-A	69	72	65	67	78	56
	LCS 240-84776/20-A	80	82	80	76	85	56

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: STD6 240-84325/10 Date Analyzed: 05/01/2013 18:07

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30501010.D Heated Purge: (Y/N) N

Calibration ID: 14918

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		435263	6.80	1812551	7.92	1071657	9.42
UPPER LIMIT		870526	7.30	3625102	8.42	2143314	9.92
LOWER LIMIT		217632	6.30	906276	7.42	535829	8.92
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84325/11		375221	6.80	1541062	7.92	894274	9.42
CCV 240-85124/2 CCVIS		351135	6.74	1440372	7.85	822660	9.36
CCV 240-85347/2 CCVIS		334874	6.73	1334506	7.84	796919	9.34
CCV 240-86786/2 CCVIS		317045	6.67	1268700	7.78	776343	9.29

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: STD6 240-84325/10 Date Analyzed: 05/01/2013 18:07

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30501010.D Heated Purge: (Y/N) N

Calibration ID: 14918

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1414611	10.70	1841239	13.75	1494768	16.20
UPPER LIMIT		2829222	11.20	3682478	14.25	2989536	16.70
LOWER LIMIT		707306	10.20	920620	13.25	747384	15.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84325/11		1149889	10.70	1547068	13.75	1261988	16.20
CCV 240-85124/2 CCVIS		1124706	10.64	1472893	13.64	1179172	16.06
CCV 240-85347/2 CCVIS		1091698	10.62	1448984	13.61	1127331	16.01
CCV 240-86786/2 CCVIS		1069604	10.56	1363088	13.51	1075868	15.89

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCV 240-85124/2 Date Analyzed: 05/08/2013 10:00

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30508002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		351135	6.74	1440372	7.85	822660	9.36
UPPER LIMIT		702270	7.24	2880744	8.35	1645320	9.86
LOWER LIMIT		175568	6.24	720186	7.35	411330	8.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84776/19-A		319402	6.74	1272044	7.85	732106	9.36
LCS 240-84776/20-A		296635	6.75	1217470	7.85	710239	9.36
240-23844-2	MRC-MW100A-043013	313530	6.75	1242794	7.85	735135	9.36
240-23844-3	MRC-MW100B-043013	341107	6.75	1379265	7.85	810772	9.36
240-23844-4	MRC-OF07-043013	340394	6.74	1357423	7.85	806234	9.36

DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
NPT = Naphthalene-d8
Area Limit = 50%-200% of internal standard area
ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT
ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCV 240-85124/2 Date Analyzed: 05/08/2013 10:00

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30508002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1124706	10.64	1472893	13.64	1179172	16.06
UPPER LIMIT		2249412	11.14	2945786	14.14	2358344	16.56
LOWER LIMIT		562353	10.14	736447	13.14	589586	15.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84776/19-A		1182114	10.64	1272485	13.63	1041446	16.05
LCS 240-84776/20-A		972985	10.64	1278116	13.64	1015358	16.05
240-23844-2	MRC-MW100A-043013	1197402	10.64	1349502	13.64	1138830	16.06
240-23844-3	MRC-MW100B-043013	1302972	10.64	1494959	13.64	1275941	16.06
240-23844-4	MRC-OF07-043013	1283125	10.64	1468625	13.64	1230601	16.06

PHN = Phenanthrene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-d12
CRY = Chrysene-d12
Area Limit = 50%-200% of internal standard area
PRY = Perylene-d12
RT Limit = ± 0.5 minutes of internal standard RT
PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCV 240-85347/2 Date Analyzed: 05/09/2013 09:56

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30509002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		334874	6.73	1334506	7.84	796919	9.34
UPPER LIMIT		669748	7.23	2669012	8.34	1593838	9.84
LOWER LIMIT		167437	6.23	667253	7.34	398460	8.84
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-23844-6	MRC-MW-93D-043013	324222	6.73	1310921	7.83	784604	9.34

DCB = 1,4-Dichlorobenzene-d4
DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
NPT = Naphthalene-d8
Area Limit = 50%-200% of internal standard area
ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT
ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCV 240-85347/2 Date Analyzed: 05/09/2013 09:56

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30509002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1091698	10.62	1448984	13.61	1127331	16.01
UPPER LIMIT		2183396	11.12	2897968	14.11	2254662	16.51
LOWER LIMIT		545849	10.12	724492	13.11	563666	15.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-23844-6	MRC-MW-93D-043013	1202683	10.62	1480034	13.61	1287321	16.02

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area

PRY = Perylene-d12

RT Limit = ± 0.5 minutes of internal standard RT

PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCV 240-86786/2 Date Analyzed: 05/21/2013 10:14

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30521002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		317045	6.67	1268700	7.78	776343	9.29
UPPER LIMIT		634090	7.17	2537400	8.28	1552686	9.79
LOWER LIMIT		158523	6.17	634350	7.28	388172	8.79
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-23844-5	MRC-MW-94D-043013	292900	6.67	1190800	7.78	711179	9.29

DCB = 1,4-Dichlorobenzene-d4

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

NPT = Naphthalene-d8

Area Limit = 50%-200% of internal standard area

ANT = Acenaphthene-d10

RT Limit = ± 0.5 minutes of internal standard RT

ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Sample No.: CCV 240-86786/2 Date Analyzed: 05/21/2013 10:14

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30521002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1069604	10.56	1363088	13.51	1075868	15.89
UPPER LIMIT		2139208	11.06	2726176	14.01	2151736	16.39
LOWER LIMIT		534802	10.06	681544	13.01	537934	15.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-23844-5	MRC-MW-94D-043013	1175634	10.56	1280995	13.50	1070812	15.89

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area

PRY = Perylene-d12

RT Limit = ± 0.5 minutes of internal standard RT

PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23844-1

SDG No.:

Project: 2013 MRC GW SAMPLING MD

Client Sample ID	Lab Sample ID
MRC-MW100B-043013	240-23844-3
MRC-MW-94D-043013	240-23844-5
MRC-MW-93D-043013	240-23844-6

Comments:

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 05/16/2013 18:24 End Date: 05/16/2013 19:37

Lab Sample Id	D/F	Type	Time	Analytes: Hg
IC 440-105018/6-A	1		18:24	X
IC 440-105018/7-A	1		18:26	X
IC 440-105018/8-A	1		18:29	X
IC 440-105018/9-A	1		18:31	X
IC 440-105018/10-A	1		18:34	X
IC 440-105018/11-A	1		18:36	X
ICV 440-105018/1-A	1		18:39	X
ICB 440-105018/2-A	1		18:41	X
CRA 440-105018/5-A	1		18:44	X
MB 440-105035/1-A	1	T	18:46	X
LCS 440-105035/2-A	1	T	18:48	X
ZZZZZZ			18:51	
440-46166-G-3-B MS	1	T	18:53	X
440-46166-G-3-C MSD	1	T	18:56	X
ZZZZZZ			18:58	
ZZZZZZ			19:00	
ZZZZZZ			19:03	
ZZZZZZ			19:05	
CCV 440-105018/3-A	1		19:08	X
CCB 440-105018/4-A	1		19:10	X
ZZZZZZ			19:13	
240-23844-3	1	T	19:15	X
240-23844-5	1	T	19:18	X
240-23844-6	1	T	19:20	X
ZZZZZZ			19:23	
ZZZZZZ			19:25	
ZZZZZZ			19:28	
ZZZZZZ			19:30	
CCV 440-105018/3-A	1		19:32	X
CCB 440-105018/4-A	1		19:35	X
CRA 440-105018/5-A	1		19:37	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

ICV Source: ME 1PPM HG2_00079 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00081

Analyte	ICV 440-105018/1-A 05/16/2013 18:39				CCV 440-105018/3-A 05/16/2013 19:08				CCV 440-105018/3-A 05/16/2013 19:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.23		8.00	103	4.31		4.00	108	4.42		4.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-105018/2-A 05/16/2013 18:41		CCB 440-105018/4-A 05/16/2013 19:10		CCB 440-105018/4-A 05/16/2013 19:35			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-105035/1-A	05/16/2013 12:51	105035		20	20
LCS 440-105035/2-A	05/16/2013 12:51	105035		20	20
440-46166-G-3-B MS	05/16/2013 12:51	105035		20	20
440-46166-G-3-C MSD	05/16/2013 12:51	105035		20	20
240-23844-3	05/16/2013 12:51	105035		20	20
240-23844-5	05/16/2013 12:51	105035		20	20
240-23844-6	05/16/2013 12:51	105035		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-105035/1-A

Instrument Code: CV-HG2 Batch No.: 105230

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-105035/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00081

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.00		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-105018/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00081

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.240		120	50-150

Lab Sample ID: CRA 440-105018/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00081

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.235		117	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-46166-G-3-B MS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.12		0.20	U	8.00	101	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-46166-G-3-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.17	8.00	102	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23844-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23844-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 05/08/2013 11:36 End Date: 05/08/2013 21:27

Lab Sample Id	D/F	Type	Time	Analytes: Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn
STD0 440-103278/1 IC	1		11:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD1 440-103278/2 IC	1		11:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD2 440-103278/3 IC	1		11:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD3 440-103278/4 IC	1		11:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
STD4 440-103278/5 IC	1		11:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICV 440-103278/6	1		11:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICB 440-103278/7	1		11:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI 440-103278/8	1		11:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRI 440-103278/9	1		11:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA 440-103278/10	1		11:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSAB 440-103278/11	1		11:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RINSE 440-103278/12			12:05																
ICSA 440-103278/13			18:29																
ICSAB 440-103278/14			18:31																
RINSE 440-103278/15			18:34																
CRI 440-103278/16			18:36																
CCV 440-103278/17	1		20:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-103278/18	1		20:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MB 440-103058/1-A	1	R	20:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LCS 440-103058/2-A	1	R	20:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			20:34																
440-45233-B-1-B MS	1	R	20:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-45233-B-1-C MSD	1	R	20:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
440-45233-B-1-A PDS	1	R	20:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			20:43																
ZZZZZZ			20:46																
ZZZZZZ			20:48																
ZZZZZZ			20:50																
CCV 440-103278/29	1		20:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-103278/30	1		20:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ZZZZZZ			20:57																
ZZZZZZ			20:59																
ZZZZZZ			21:02																
ZZZZZZ			21:04																
240-23844-3	1	R	21:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-23844-5	1	R	21:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-23844-6	1	R	21:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
240-23844-6 SD	5	R	21:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCV 440-103278/39	1		21:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CCB 440-103278/40	1		21:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICSA 440-103278/41			21:20																
ICSAB 440-103278/42			21:22																

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 05/08/2013 11:36 End Date: 05/08/2013 21:27

Lab Sample Id	D/F	Type	Time	Analytes																										
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn											
RINSE 440-103278/43			21:25																											
CRI 440-103278/44			21:27																											

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	ICV 440-103278/6 05/08/2013 11:47				CCV 440-103278/17 05/08/2013 20:25				CCV 440-103278/29 05/08/2013 20:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.5		25.0	90	48.2		50.0	96	48.3		50.0	97
Arsenic	25.3		25.0	101	50.7		50.0	101	51.1		50.0	102
Barium	25.9		25.0	104	49.6		50.0	99	49.8		50.0	100
Beryllium	25.1		25.0	100	51.9		50.0	104	50.1		50.0	100
Cadmium	25.4		25.0	101	48.5		50.0	97	48.5		50.0	97
Chromium	25.9		25.0	104	51.3		50.0	103	50.8		50.0	102
Cobalt	24.6		25.0	99	49.6		50.0	99	49.5		50.0	99
Copper	25.4		25.0	102	48.3		50.0	97	47.1		50.0	94
Lead	25.1		25.0	100	49.0		50.0	98	48.9		50.0	98
Molybdenum	26.3		25.0	105	48.2		50.0	96	48.6		50.0	97
Nickel	25.4		25.0	102	47.7		50.0	95	47.5		50.0	95
Selenium	25.3		25.0	101	51.8		50.0	104	51.4		50.0	103
Silver	24.7		25.0	99	47.5		50.0	95	48.1		50.0	96
Thallium	25.6		25.0	102	52.6		50.0	105	52.2		50.0	104
Vanadium	25.5		25.0	102	52.2		50.0	104	51.6		50.0	103
Zinc	26.1		25.0	104	53.2		50.0	106	53.4		50.0	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	CCV 440-103278/39 05/08/2013 21:15											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	47.6		50.0	95								
Arsenic	50.5		50.0	101								
Barium	49.2		50.0	98								
Beryllium	51.5		50.0	103								
Cadmium	48.2		50.0	96								
Chromium	50.1		50.0	100								
Cobalt	49.8		50.0	100								
Copper	47.8		50.0	96								
Lead	48.5		50.0	97								
Molybdenum	47.3		50.0	95								
Nickel	47.2		50.0	94								
Selenium	52.1		50.0	104								
Silver	47.0		50.0	94								
Thallium	52.6		50.0	105								
Vanadium	51.2		50.0	102								
Zinc	53.1		50.0	106								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-103278/7 05/08/2013 11:49		CCB 440-103278/18 05/08/2013 20:28		CCB 440-103278/30 05/08/2013 20:55		CCB 440-103278/40 05/08/2013 21:18	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.310	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	0.168	J	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	0.131	J	0.129	J	0.103	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-103058/1-A	05/08/2013 12:51	103058		50	50
LCS 440-103058/2-A	05/08/2013 12:51	103058		50	50
440-45233-B-1-B MS	05/08/2013 12:51	103058		50	50
440-45233-B-1-C MSD	05/08/2013 12:51	103058		50	50
240-23844-3	05/08/2013 12:51	103058		50	50
240-23844-5	05/08/2013 12:51	103058		50	50
240-23844-6	05/08/2013 12:51	103058		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-103058/1-A

Instrument Code: ICPMS5 Batch No.: 103278

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	2.0	U		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-103058/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00017

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	77.1		96	80	120		6020
Arsenic	80.0	79.1		99	80	120		6020
Beryllium	80.0	78.7		98	80	120		6020
Cadmium	80.0	77.3		97	80	120		6020
Barium	80.0	79.2		99	80	120		6020
Chromium	80.0	80.6		101	80	120		6020
Copper	80.0	78.2		98	80	120		6020
Nickel	80.0	76.4		96	80	120		6020
Lead	80.0	77.2		97	80	120		6020
Selenium	80.0	80.7		101	80	120		6020
Cobalt	80.0	79.0		99	80	120		6020
Silver	80.0	79.6		99	80	120		6020
Thallium	80.0	82.5		103	80	120		6020
Zinc	80.0	72.1		90	80	120		6020
Molybdenum	80.0	76.7		96	80	120		6020
Vanadium	80.0	80.9		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICSA 440-103278/10 Instrument ID: ICPMS5

Lab File ID: 011ICSA.d ICS Source: MEICPMS4 ICSA_00211

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.318**	
Arsenic		**0.0390**	
Barium		**0.202**	
Beryllium		**0.0160**	
Cadmium		**1.16**	
Chromium		**1.46**	
Cobalt		**0.104**	
Copper		**0.996**	
Lead		**0.122**	
Molybdenum	**2000**	**2134**	**107**
Nickel		**1.06**	
Selenium		**-0.112**	
Silver		**0.0510**	
Thallium		**0.0180**	
Vanadium		**0.165**	
Zinc		**3.42**	
Aluminum	*100000*	*89383*	*89*
Calcium	*100000*	*94626*	*95*
Cerium		*0.0490*	
Iron	*100000*	*91715*	*92*
Magnesium	*100000*	*93342*	*93*
Manganese		*0.145*	
Potassium	*100000*	*95202*	*95*
Sodium	*100000*	*94937*	*95*
Sr		*4.98*	
Tin		*0.137*	
Uranium		*0.0200*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Lab Sample ID: ICSAB 440-103278/11 Instrument ID: ICPMS5

Lab File ID: 012ICSB.d ICS Source: MEICPMS4 ICSB_00210

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.9**	**105**
Arsenic	**20.0**	**19.8**	**99**
Barium	**20.0**	**21.5**	**108**
Beryllium	**20.0**	**21.1**	**106**
Cadmium	**20.0**	**20.8**	**104**
Chromium	**20.0**	**20.5**	**102**
Cobalt	**20.0**	**18.7**	**93**
Copper	**20.0**	**19.1**	**96**
Lead	**20.0**	**19.3**	**97**
Molybdenum	**2020**	**2170**	**107**
Nickel	**20.0**	**19.2**	**96**
Selenium	**20.0**	**18.7**	**93**
Silver	**20.0**	**19.5**	**97**
Thallium	**20.0**	**19.2**	**96**
Vanadium	**20.0**	**19.9**	**100**
Zinc	**20.0**	**20.9**	**104**
Aluminum	*100000*	*89511*	*89*
Calcium	*101000*	*95957*	*95*
Cerium	*20.0*	*21.6*	*108*
Iron	*100000*	*92420*	*92*
Magnesium	*101000*	*94309*	*94*
Manganese	*20.0*	*19.4*	*97*
Potassium	*101000*	*96621*	*96*
Sodium	*101000*	*95604*	*95*
Sr	*20.0*	*26.9*	*135*
Tin	*20.0*	*20.8*	*104*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-45233-B-1-B MS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	76.4		2.0	U	80.0	96	75-125		6020
Arsenic	81.5		5.0	U	80.0	102	75-125		6020
Beryllium	79.4		1.0	U	80.0	99	75-125		6020
Cadmium	70.9		1.0	U	80.0	89	75-125		6020
Barium	92.3		12		80.0	100	75-125		6020
Chromium	74.5		2.0	U	80.0	93	75-125		6020
Copper	69.2		1.6	J	80.0	84	75-125		6020
Nickel	75.8		6.9		80.0	86	75-125		6020
Lead	71.1		1.0	U	80.0	89	75-125		6020
Selenium	78.6		5.0	U	80.0	98	75-125		6020
Cobalt	76.6		3.3		80.0	92	75-125		6020
Silver	74.0		0.13	J	80.0	92	75-125		6020
Thallium	75.9		2.0	U	80.0	95	75-125		6020
Zinc	63.6		20	U	80.0	80	75-125		6020
Molybdenum	79.3		0.29	J	80.0	99	75-125		6020
Vanadium	77.7		20	U	80.0	97	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-45233-B-1-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	75.9		80.0	95	75-125	1	20		6020
Arsenic	81.4		80.0	102	75-125	0	20		6020
Beryllium	79.1		80.0	99	75-125	0	20		6020
Cadmium	70.6		80.0	88	75-125	0	20		6020
Barium	91.4		80.0	99	75-125	1	20		6020
Chromium	75.8		80.0	95	75-125	2	20		6020
Copper	71.1		80.0	87	75-125	3	20		6020
Nickel	75.8		80.0	86	75-125	0	20		6020
Lead	71.4		80.0	89	75-125	0	20		6020
Selenium	78.4		80.0	98	75-125	0	20		6020
Cobalt	76.9		80.0	92	75-125	0	20		6020
Silver	73.8		80.0	92	75-125	0	20		6020
Thallium	77.4		80.0	97	75-125	2	20		6020
Zinc	64.2		80.0	80	75-125	1	20		6020
Molybdenum	79.6		80.0	99	75-125	0	20		6020
Vanadium	79.7		80.0	100	75-125	3	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 440-45233-B-1-A PDS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	74.2		2.0	U	80.0	93	75-125		6020
Arsenic	80.3		5.0	U	80.0	100	75-125		6020
Beryllium	78.3		1.0	U	80.0	98	75-125		6020
Cadmium	69.8		1.0	U	80.0	87	75-125		6020
Barium	90.9		12		80.0	98	75-125		6020
Chromium	74.5		2.0	U	80.0	93	75-125		6020
Copper	69.3		1.6	J	80.0	85	75-125		6020
Nickel	75.7		6.9		80.0	86	75-125		6020
Lead	71.0		1.0	U	80.0	89	75-125		6020
Selenium	78.9		5.0	U	80.0	99	75-125		6020
Cobalt	76.8		3.3		80.0	92	75-125		6020
Silver	68.5		0.13	J	80.0	85	75-125		6020
Thallium	76.7		2.0	U	80.0	96	75-125		6020
Zinc	67.8		20	U	80.0	85	75-125		6020
Molybdenum	78.3		0.29	J	80.0	97	75-125		6020
Vanadium	78.7		20	U	80.0	98	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23844-6

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23844-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	1.1	J	10	U	NC		6020
Arsenic	1.0	J	25	U	NC		6020
Beryllium	0.13	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Barium	83		81.9		1.4		6020
Chromium	6.2		6.07	J	NC		6020
Copper	9.5		9.94	J	NC		6020
Nickel	8.4		8.37	J	NC		6020
Lead	8.0		8.17		NC		6020
Selenium	5.0	U	25	U	NC		6020
Cobalt	2.0		2.06	J	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	2.0	U	10	U	NC		6020
Zinc	640		613		3.9		6020
Molybdenum	0.97	J	50	U	NC		6020
Vanadium	8.9	J	9.51	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103278/8 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.07	J	107	50-150
Arsenic	1.00	1.03		103	50-150
Beryllium	0.500	0.515		103	50-150
Cadmium	0.500	0.534	J	107	50-150
Barium	1.00	1.05		105	50-150
Chromium	1.00	1.19	J	119	50-150
Copper	1.00	1.10	J	110	50-150
Nickel	1.00	1.22	J	122	50-150
Lead	1.00	1.05		105	50-150
Selenium	1.00	0.795	J	80	50-150
Cobalt	0.500	0.524	J	105	50-150
Silver	1.00	1.06		106	50-150
Thallium	1.00	1.06		106	50-150
Zinc	5.00	5.44	J	109	50-150
Molybdenum	1.00	1.09	J	109	50-150
Vanadium	2.00	2.10		105	50-150

Lab Sample ID: CRI 440-103278/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.01		100	50-150
Arsenic	2.00	1.99		99	50-150
Beryllium	1.00	1.01		101	50-150
Cadmium	1.00	1.02		102	50-150
Barium	2.00	2.23		111	50-150
Chromium	2.00	2.36		118	50-150
Copper	2.00	2.16		108	50-150
Nickel	2.00	2.50		125	50-150
Lead	2.00	2.04		102	50-150
Selenium	2.00	2.11		106	50-150
Cobalt	1.00	1.04		104	50-150
Silver	2.00	2.08		104	50-150
Thallium	2.00	2.10		105	50-150
Zinc	10.0	11.3	J	113	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103278/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	2.00	2.08		104	50-150
Vanadium	4.00	4.17		104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23844-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23844-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23844-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/08/2013 End Date: 05/08/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-103278/1	11:36	100		100		100		100		100	
STD1 440-103278/2	11:38	100		100		100		100		100	
STD2 440-103278/3	11:40	99		100		100		100		101	
STD3 440-103278/4	11:43	98		98		98		98		98	
STD4 440-103278/5	11:45	101		99		99		99		101	
ICV 440-103278/6	11:47	99		99		99		99		100	
ICB 440-103278/7	11:49	101		100		99		99		100	
CRI 440-103278/8	11:52	100		99		100		100		100	
CRI 440-103278/9	11:54	100		100		100		99		100	
ICSA 440-103278/10	11:56	91		100		97		93		93	
ICSAB 440-103278/11	11:59	86		100		97		93		92	
CCV 440-103278/17	20:25	84		91		88		87		95	
CCB 440-103278/18	20:28	85		93		90		89		95	
MB 440-103058/1-A	20:30	88		93		90		89		97	
LCS 440-103058/2-A	20:32	91		92		91		90		95	
440-45233-B-1-B MS	20:37	81		93		86		85		89	
440-45233-B-1-C MSD	20:39	82		93		87		86		90	
440-45233-B-1-A PDS	20:41	82		94		86		85		90	
CCV 440-103278/29	20:52	93		99		92		92		97	
CCB 440-103278/30	20:55	90		94		91		91		94	
240-23844-3	21:06	79		90		87		85		90	
240-23844-5	21:08	80		86		84		84		91	
240-23844-6	21:11	79		89		86		86		91	
240-23844-6 SD	21:13	82		91		88		88		93	
CCV 440-103278/39	21:15	82		91		87		87		94	
CCB 440-103278/40	21:18	84		93		90		90		96	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23844-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/08/2013 End Date: 05/08/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-103278/1	11:36	100									
STD1 440-103278/2	11:38	100									
STD2 440-103278/3	11:40	102									
STD3 440-103278/4	11:43	98									
STD4 440-103278/5	11:45	101									
ICV 440-103278/6	11:47	100									
ICB 440-103278/7	11:49	100									
CRI 440-103278/8	11:52	100									
CRI 440-103278/9	11:54	101									
ICSA 440-103278/10	11:56	96									
ICSAB 440-103278/11	11:59	95									
CCV 440-103278/17	20:25	97									
CCB 440-103278/18	20:28	97									
MB 440-103058/1-A	20:30	97									
LCS 440-103058/2-A	20:32	98									
440-45233-B-1-B MS	20:37	93									
440-45233-B-1-C MSD	20:39	93									
440-45233-B-1-A PDS	20:41	93									
CCV 440-103278/29	20:52	96									
CCB 440-103278/30	20:55	95									
240-23844-3	21:06	93									
240-23844-5	21:08	93									
240-23844-6	21:11	95									
240-23844-6 SD	21:13	95									
CCV 440-103278/39	21:15	95									
CCB 440-103278/40	21:18	97									

FORM XV - IN

VOC CALCULATION

	SAMPLE		
	MRC-MW-100B-043013		
TARGET ANALYTE	**trichloroethene**		
ANALYTE RESPONSE	930639		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1467504		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.2799		
DILUTION FACTOR (DF)	10		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	226.57	µg/L

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 | Lab Sample ID: 240-23844-3

Matrix: Water | Lab File ID: UXR4340.D

Analysis Method: 8260B | Date Collected: 04/30/2013 11:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 12:49

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85645 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	50	U	50	1.1
87-68-3	Hexachlorobutadiene	10	U	10	3.0
591-78-6	2-Hexanone	50	U	50	4.1
98-82-8	Isopropylbenzene	10	U	10	1.3
75-09-2	Methylene Chloride	8.4	J B	10	3.3
108-10-1	4-Methyl-2-pentanone	50	U	50	3.2
1634-04-4	Methyl tert-butyl ether	10	U	10	1.7
179601-23-1	m-Xylene & p-Xylene	20	U	20	2.4
91-20-3	Naphthalene	10	U	10	2.4
104-51-8	n-Butylbenzene	10	U	10	1.2
103-65-1	n-Propylbenzene	10	U	10	1.4
95-47-6	o-Xylene	10	U	10	1.4
99-87-6	p-Isopropyltoluene	10	U	10	1.2
135-98-8	sec-Butylbenzene	10	U	10	1.3
100-42-5	Styrene	10	U	10	1.1
994-05-8	Tert-amyl-methyl ether (TAME)	50	U	50	0.67
75-65-0	tert-Butyl alcohol	200	U	200	39
98-06-6	tert-Butylbenzene	10	U	10	1.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	2.3
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	1.8
127-18-4	Tetrachloroethene	10	U	10	2.9
108-88-3	Toluene	10	U	10	1.3
156-60-5	trans-1,2-Dichloroethene	10	U	10	1.9
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.9
87-61-6	1,2,3-Trichlorobenzene	10	U	10	1.7
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.5
71-55-6	1,1,1-Trichloroethane	10	U	10	2.2
79-01-6	Trichloroethene	230		10	1.7
75-69-4	Trichlorofluoromethane	10	U	10	2.1
96-18-4	1,2,3-Trichloropropane	10	U	10	4.3
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	10	U	10	2.8
526-73-8	1,2,3-Trimethylbenzene	50	U	50	0.059
95-63-6	1,2,4-Trimethylbenzene	10	U	10	1.2
108-05-4	Vinyl acetate	20	U	20	1.9
75-01-4	Vinyl chloride	10	U	10	2.2

Report Date: 14-May-2013 10:45:51 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\NCCHROM\ChromData\A3UX17\20130513-19761.b\UXR4340.D		
Lims ID:	240-23844-C-3	Client ID:	MRC-MW100B-043013
Inject. Date:	13-May-2013 12:49:30	Dil. Factor:	10.0000
Sample Type:	Client		
Sample ID:	240-0019761-008		
Misc. Info.:			
Operator:	1644	Instrument ID:	A3UX17
Purge Vol:	5.000 mL	ALS Bottle#:	7
Lims Batch ID:	85645	Lims Sample ID:	8
Detector:	MS SCAN		
Method:	\\NCCHROM\ChromData\A3UX17\20130513-19761.b\8260_17.m		
Last Update:	14-May-2013 10:45:50	Calib Date:	07-May-2013 16:05:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCCHROM\ChromData\A3UX17\20130507-19606.b\UXR4186.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	RT Order ID
Column Type:	DB-624	Column Dia:	0.18 mm
Process Host:	XAWRK034		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	5.763	5.763	0.0	99	1467504	10.0	
* 2 Chlorobenzene-d5	117	8.479	8.479	0.0	85	1233464	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.720	10.720	0.0	96	622789	10.0	
$ 6 Dibromofluoromethane (Surr)	113	5.182	5.182	0.0	58	282210	8.58	
$ 7 1,2-Dichloroethane-d4 (Surr)	65	5.479	5.479	0.0	0	381857	8.76	
$ 8 Toluene-d8 (Surr)	98	7.151	7.139	0.012	93	1266303	8.56	
$ 9 4-Bromofluorobenzene (Surr)	95	9.582	9.582	0.0	88	487151	8.17	
14 Dichlorodifluoromethane	85		1.648					
15 Chloromethane	50		1.826					9
17 Vinyl chloride	62		1.957					
18 Bromomethane	94		2.312					
19 Chloroethane	64		2.419					9
21 Trichlorofluoromethane	101		2.668					
25 1,1-Dichloroethene	96	3.178	3.178	0.0	88	304309	7.91	
26 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.190					
27 Acetone	43		3.237					
29 Carbon disulfide	76		3.391					9
33 Methylene Chloride	84	3.641	3.640	0.001	93	67913	0.8395	
34 2-Methyl-2-propanol	59	3.735	3.735	0.0	43	829	0.2324	
35 Methyl tert-butyl ether	73		3.878					
37 trans-1,2-Dichloroethene	96		3.878					
39 1,1-Dichloroethane	63	4.269	4.269	0.0	85	186939	2.43	
40 Vinyl acetate	86		4.305					
41 Isopropyl ether	87		4.305					9
43 Tert-butyl ethyl ether	59		4.625					9
44 2,2-Dichloropropane	77		4.767					9
46 2-Butanone (MEK)	43		4.779					
45 cis-1,2-Dichloroethene	96	4.779	4.779	0.0	69	184945	4.06	
50 Chlorobromomethane	128		4.992					
52 Chloroform	83		5.040					9
53 1,1,1-Trichloroethane	97		5.206					9
56 1,1-Dichloropropene	75		5.348					

Report Date: 14-May-2013 10:45:51 Chrom Revision: 2.0 01-Apr-2013 21:16:10
Data File: \\NCCHROM\ChromData\A3UX17\20130513-19761.b\UXR4340.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
55 Carbon tetrachloride	117		5.348					
58 Benzene	78		5.526					
59 1,2-Dichloroethane	62		5.550					
60 Tert-amyl methyl ether	73		5.609					
63 Trichloroethene	130	6.083	6.083	0.0	93	930639	22.7	
66 1,2-Dichloropropane	63		6.285					
69 Dibromomethane	93		6.392					
70 Dichlorobromomethane	83		6.510					
72 2-Chloroethyl vinyl ether	63		6.759					
73 cis-1,3-Dichloropropene	75		6.902					
74 4-Methyl-2-pentanone (MIBK)	43		7.032					
75 Toluene	91		7.210					9
76 trans-1,3-Dichloropropene	75		7.400					
79 Tetrachloroethene	164	7.696	7.696	0.0	57	3476	0.1022	
81 1,3-Dichloropropane	76		7.732					
82 2-Hexanone	43		7.779					9
84 Chlorodibromomethane	129		7.945					
85 Ethylene Dibromide	107		8.052					
87 Chlorobenzene	112		8.502					
88 1,1,1,2-Tetrachloroethane	131		8.574					
89 Ethylbenzene	106		8.585					
90 m-Xylene & p-Xylene	106		8.692					
91 o-Xylene	106		9.084					9
92 Styrene	104		9.095					
93 Bromoform	173		9.285					
95 Isopropylbenzene	105		9.427					
97 1,1,2,2-Tetrachloroethane	83		9.724					
98 Bromobenzene	156		9.748					
100 1,2,3-Trichloropropane	110		9.771					
101 N-Propylbenzene	120		9.831					
102 2-Chlorotoluene	126		9.925					
104 4-Chlorotoluene	126		10.032					
105 tert-Butylbenzene	119		10.317					
106 1,2,4-Trimethylbenzene	105		10.364					9
107 sec-Butylbenzene	105		10.530					
108 1,3-Dichlorobenzene	146		10.661					
109 4-Isopropyltoluene	119		10.673					
110 1,4-Dichlorobenzene	146		10.744					
111 1,2,3-Trimethylbenzene	105		10.791					
112 n-Butylbenzene	91		11.076					9
113 1,2-Dichlorobenzene	146		11.123					
114 1,2-Dibromo-3-Chloropropane	157		11.906					
116 1,2,4-Trichlorobenzene	180		12.724					
117 Hexachlorobutadiene	225		12.890					
118 Naphthalene	128		12.997					9
119 1,2,3-Trichlorobenzene	180		13.258					
S 124 Xylenes, Total	106		16.530					7

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23844-1

SDG No.:

Lab Sample ID: CCVIS 240-85645/2 Calibration Date: 05/13/2013 10:30

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4334.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2536	0.2891		1.00	0.0100	14.0	50.0
Chloromethane	Ave	0.4314	0.4253	0.1000	1.00	0.0100	-1.4	50.0
Vinyl chloride	Ave	0.3697	0.3756		1.00	0.0100	1.6	20.0
Bromomethane	Ave	0.1251	0.1469		1.00	0.0100	17.5	50.0
Chloroethane	Ave	0.2154	0.2063		1.00	0.0100	-4.2	50.0
Trichlorofluoromethane	Ave	0.2313	0.3109		1.00	0.0100	34.4	50.0
Acrolein	Ave	0.0526	0.0330		20.0	0.100	-37.3	50.0
1,1-Dichloroethene	Ave	0.2622	0.2585		1.00	0.0100	-1.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1759	0.2019		1.00	0.0100	14.8	50.0
Acetone	Lin1		0.0723		10.0	0.0200	-31.5	50.0
Iodomethane	Ave	0.3908	0.3933		1.00	0.0100	0.6	50.0
Carbon disulfide	Ave	0.8591	0.8425		1.00	0.0100	-1.9	50.0
Acetonitrile	Ave	0.0425	0.0288		20.0	0.100	-32.2	50.0
Methyl acetate	Ave	0.2372	0.1845		10.0	0.0200	-22.2	50.0
Methylene Chloride	Lin1		0.3116		1.00	0.0100	-1.1	50.0
tert-Butyl alcohol	Ave	0.0243	0.0151		50.0	0.200	-37.8	50.0
Acrylonitrile	Ave	0.1215	0.0912		20.0	0.0200	-25.0	50.0
Methyl tert-butyl ether	Ave	0.8230	0.7090		1.00	0.0100	-13.9	50.0
trans-1,2-Dichloroethene	Ave	0.2920	0.2776		1.00	0.0100	-4.9	50.0
Hexane	Ave	0.0682	0.0699		1.00	0.0100	2.4	20.0
1,1-Dichloroethane	Ave	0.5243	0.5184	0.1000	1.00	0.0100	-1.1	50.0
Vinyl acetate	Ave	0.0505	0.0400		2.00	0.0100	-20.9	50.0
2,2-Dichloropropane	Ave	0.2783	0.3029		1.00	0.0100	8.8	50.0
2-Butanone	Ave	0.1422	0.0982		10.0	0.0200	-31.0	50.0
cis-1,2-Dichloroethene	Ave	0.3105	0.3100		1.00	0.0100	-0.2	50.0
Bromochloromethane	Ave	0.1394	0.1349		1.00	0.0100	-3.3	50.0
Tetrahydrofuran	Lin1		0.0750		5.00	0.0100	-24.0	50.0
Chloroform	Ave	0.4657	0.4731		1.00	0.0100	1.6	20.0
1,1,1-Trichloroethane	Ave	0.3629	0.3819		1.00	0.0100	5.2	50.0
Cyclohexane	Ave	0.5647	0.6101		1.00	0.0100	8.0	50.0
1,1-Dichloropropene	Ave	0.3778	0.3825		1.00	0.0100	1.2	50.0
Carbon tetrachloride	Ave	0.2917	0.3497		1.00	0.0100	19.9	50.0
Benzene	Ave	1.180	1.151		1.00	0.0100	-2.4	50.0
1,2-Dichloroethane	Ave	0.3869	0.3796		1.00	0.0100	-1.9	50.0
Trichloroethene	Ave	0.2799	0.2772		1.00	0.0100	-1.0	50.0
Methylcyclohexane	Ave	0.4848	0.5125		1.00	0.0100	5.7	50.0
1,2-Dichloropropane	Ave	0.2859	0.2890		1.00	0.0100	1.1	20.0
1,4-Dioxane	Ave	0.0028	0.0018		50.0	0.500	-35.5	50.0
Dibromomethane	Ave	0.1529	0.1474		1.00	0.0100	-3.6	50.0
Bromodichloromethane	Ave	0.3166	0.3301		1.00	0.0100	4.3	50.0

SVOC CALCULATION LIQUIDS	**SAMPLE MRC-MW-100B-043013**		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	1114031		
INTERNAL STANDARD	1,4-dichlorobenzene-D4		
I.S. RESPONSE	341107		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.5537		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1050	ml	
DILUTION FACTOR (DF)	1		
INJECTION VOLUME - VOL inj.	0.001	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final / (I.S. RESPONSE) X (CAL. RRF) X (vol. initial)	=	44.9400	ng/ml or ug/l

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23844-1

SDG No.:

Client Sample ID: MRC-MW100B-043013 | Lab Sample ID: 240-23844-3

Matrix: Water | Lab File ID: 30508027.D

Analysis Method: 8270D | Date Collected: 04/30/2013 11:50

Extract. Method: 3520C | Date Extracted: 05/06/2013 09:30

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2013 20:53

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85124 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	45		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	47		20-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	70		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	46		21-110
4165-62-2	Phenol-d5 (Surr)	51		21-110
1718-51-0	Terphenyl-d14 (Surr)	45		24-110

Report Date: 09-May-2013 11:48:30 Chrom Revision: 2.0 01-Apr-2013 21:16:10

TestAmerica Canton
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4HP7\20130508-19638.b\30508027.D		
Lims ID:	240-23844-E-3-A	Client ID:	MRC-MW100B-043013
Inject. Date:	08-May-2013 20:53:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0019638-027		
Misc. Info.:	240-23844-E-3-A		
Operator:	001710	Instrument ID:	A4HP7
Injection Vol:	1.0 ul	ALS Bottle#:	27
Lims Batch ID:	85124	Lims Sample ID:	27
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4HP7\20130508-19638.b\8270_hp7.m		
Last Update:	09-May-2013 11:48:20	Calib Date:	07-May-2013 16:52:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4HP7\20130507-19610.b\30507012.D		
Limit Group:	MSS 8270D ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Column Type:	5% phenyl	Column Dia:	0.18 mm
Process Host:	XAWRK009		

First Level Reviewer: gruberj Date: 09-May-2013 11:48:01

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
1 1,4-Dichlorobenzene-d4	152	6.745	6.739	0.006	94	341107	4.00	
* 2 Naphthalene-d8	136	7.852	7.852	0.0	100	1379265	4.00	
* 3 Acenaphthene-d10	164	9.360	9.360	0.0	93	810772	4.00	
* 4 Phenanthrene-d10	188	10.639	10.638	0.001	98	1302972	4.00	
* 5 Chrysene-d12	240	13.639	13.634	0.005	97	1494959	4.00	
* 6 Perylene-d12	264	16.057	16.051	0.006	96	1275941	4.00	
$ 7 2-Fluorophenol	112	5.536	5.525	0.011	96	812041	7.10	
$ 8 Phenol-d5	99	6.365	6.354	0.011	96	1161731	7.65	
$ 9 Nitrobenzene-d5	82	7.221	7.221	0.0	92	694296	4.57	
$ 10 2-Fluorobiphenyl (Surr)	172	8.751	8.750	0.001	100	1172499	4.72	
$ 11 2,4,6-Tribromophenol	330	10.034	10.029	0.005	89	232552	10.6	
$ 12 Terphenyl-d14	244	12.152	12.152	0.0	98	1272259	4.51	
24 1,4-Dioxane	88	3.600	3.589	0.011	96	1114031	23.6	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23844-1 Analy Batch No.: 84325

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/01/2013 14:33 Calibration End Date: 05/01/2013 18:07 Calibration ID: 14918

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84325/6	30501006.D
Level 2	STD2 240-84325/5	30501005.D
Level 3	STD3 240-84325/4	30501004.D
Level 4	STD4 240-84325/3	30501003.D
Level 5	STD5 240-84325/2	30501002.D
Level 6	STD6 240-84325/10	30501010.D
Level 7	STD7 240-84325/9	30501009.D
Level 8	STD8 240-84325/8	30501008.D
Level 9	STD9 240-84325/7	30501007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5318	0.5880 0.5394	0.5502 0.5872	0.5213 0.6030	0.5091	Ave		0.5537				6.3		20.0			
N-Nitrosodimethylamine	0.8974	0.7477 0.8955	0.8230 0.9781	0.7926 0.9669	0.8457	Ave		0.8684				9.4		20.0			
Pyridine	1.5582	1.2634 1.5762	1.3399 1.7197	1.4644 1.6674	1.5202	Ave		1.5137				10.0		20.0			
Benzaldehyde	1.4895 1.2675	1.2612 1.2301	1.3552 1.2759	1.3323 1.1304	1.3015	Ave		1.2937			0.0100	7.6		20.0			
Phenol	1.7394	1.7499 1.7086	1.7851 1.8067	1.7667 1.7363	1.7409	Ave		1.7542			0.8000	1.8		20.0			
Aniline	2.4199	2.1443 2.3565	2.3268 2.5465	2.2548 2.4320	2.3549	Ave		2.3545				5.1		20.0			
Bis(2-chloroethyl)ether	1.6038	1.6483 1.5942	1.6778 1.7553	1.6672 1.7548	1.5815	Ave		1.6604			0.7000	4.1		20.0			
2-Chlorophenol	1.2693	1.2476 1.2526	1.2750 1.3393	1.2542 1.2736	1.2636	Ave		1.2719			0.8000	2.3		20.0			
1,3-Dichlorobenzene	1.3588	1.2946 1.3579	1.3612 1.4513	1.3381 1.3992	1.3351	Ave		1.3620				3.4		20.0			
1,4-Dichlorobenzene	1.3845	1.3527 1.3857	1.3862 1.4786	1.3845 1.4417	1.3680	Ave		1.3977				3.0		20.0			
Benzyl alcohol	0.9046	0.8257 0.8890	0.8835 0.9581	0.8718 0.9449	0.8925	Ave		0.8963				4.6		20.0			
1,2-Dichlorobenzene	1.2789	1.2615 1.2721	1.3209 1.3601	1.2852 1.3047	1.2931	Ave		1.2971				2.4		20.0			
2-Methylphenol	1.2158	1.2003 1.2060	1.2565 1.2761	1.2167 1.2424	1.2371	Ave		1.2314			0.7000	2.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **JUNE 6, 2013**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOC/SVOC/METALS**
MRC GROUNDWATER SAMPLING
SAMPLE DELIVERY GROUP (SDG) 240-23909-1

SAMPLES: 9/Aqueous/VOC

MRC-OF-06A-050113	MRC-OF-06B-050113	MRC-OF-06C-050113
MRC-OF-95D-050113	MRC-OF08A-050113	MRC-OF08B-050113
MRC-OF08C-050113	MRC-OF08D-050113	TB-050113

8/Aqueous/SVOC

MRC-OF-06A-050113	MRC-OF-06B-050113	MRC-OF-06C-050113
MRC-OF-95D-050113	MRC-OF08A-050113	MRC-OF08B-050113
MRC-OF08C-050113	MRC-OF08D-050113	

1/Aqueous/Metals

MRC-OF-95D-050113

Overview

The sample set for MRC Groundwater, SDG 240-23909-1 consisted of eight (8) aqueous environmental samples and a trip blank analyzed for volatile organic compounds (VOCs). Eight (8) aqueous environmental samples were analyzed for the select semivolatile organic compound (SVOC); 1,4-dioxane. One (1) aqueous environmental sample, MRC-OF-95D-050113, was analyzed for metals.

The samples were collected on May 1, 2013 and analyzed by Test America Laboratories Inc. All analyses were conducted in accordance with SW-846 Methods 8260B for VOCs, 8270D for SVOC, 6020 and 7470A for metals analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, matrix spike/matrix spike duplicate, laboratory control sample recoveries, internal standard recoveries, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major

- The VOC initial calibration relative response factor (RRF) for tert-butyl alcohol was less than the 0.05 quality control limit on May 7, 2013 for instrument A3UX17 and the continuing calibration on May 14, 2013 @ 12:55. In addition, the RRF for vinyl acetate was less than the 0.05 quality control limit in the continuing calibration. The nondetected tert-butyl alcohol and vinyl acetate results were qualified as rejected (UR) in the affected samples.

- The VOC initial calibration RRFs for tert-butyl alcohol and vinyl acetate were less than the 0.05 quality control limit on May 11, 2013 on instrument A3UX17 and the continuing calibration on May 13, 2013 @ 9:54. The nondetected tert-butyl alcohol and vinyl acetate results were qualified as rejected

(UR) in the affected samples.

- Tentatively identified compounds (TICS) containing siloxane were qualified as rejected (R) in several samples. This compound is indicative of column bleed.

Minor

- The continuing calibration percent difference (%D) for trichlorofluoromethane was greater than 50% on May 13, 2013 @ 9:54 on instrument A3UX16. The nondetected trichlorofluoromethane results were qualified as estimated (UJ) in the affected samples.

- The initial calibration relative standard deviation (%RSD) for 1,4-dioxane was greater than the 15% quality control limit on April 11, 2013 on instrument A4HP10. The nondetected 1,4-dioxane results were qualified as estimated (UJ).

- The CRQL percent recoveries (%Rs) of several analytes were greater than the 110% quality control limit. The analytes were barium, chromium, nickel, zinc, copper, silver and vanadium. The positive silver result less than 2X CRQL was qualified as estimated (J) because of conflicting directional bias.

- Positive results reported below the quantitation limit but above the method detection limit (MDL) were qualified as estimated, (J).

Notes

The continuing calibration %Ds for dichlorodifluoromethane, bromomethane, trichlorofluoromethane, 1,1,2-trichlorotrifluoroethane, tert-butyl alcohol, 2-butanone, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, naphthalene, 1,2,3-trichlorobenzene, ethyl-t-butyl ether and tert-amyl-methyl ether were greater than the 20% quality control limit but less than 50% on May 14, 2013 @ 12:55 and 13:17 on instrument A3UX17. No action was taken on the nondetected results of the aforementioned analytes.

The continuing calibration %Ds for 1,1,2-trichlorofluoromethane, carbon tetrachloride, bromoform and diisopropyl ether were greater than the 20% quality control limit but less than 50% on May 13, 2013 @ 9:54 and 10:17 on instrument A3UX16. No action was taken on the nondetected results of the aforementioned analytes.

The laboratory control sample (LCS) percent recovery (%R) of diisopropyl ether was greater than the upper quality control in batch 240-85619. No action was taken on the nondetected diisopropyl ether results in the affected samples.

The matrix spike/ matrix spike duplicate (MS/MSD) %Rs of 2-chloroethyl vinyl ether were 0% in sample 240-24004-25. No action was taken because this sample is not included in this SDG.

Contamination was detected for several metals in the laboratory method blank, continuing calibration blanks and initial calibration blank.

Analyte	Maximum Concentration (ug/L)	Action Level (ug/L)
Antimony (1)	0.332	1.66
Nickel (2)	0.601	3.005

(1) Maximum concentration detected in the initial calibration blank analyzed on May 9, 2013 @ 19:00.

(2) Maximum concentration detected in the continuing calibration analyzed on May 9, 2013 @ 21:58.

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into account when applying the action level. No action was taken because the detected nickel result was greater than the action level.

The serial dilution of barium, chromium, copper and vanadium were greater than the 10% quality control limit. No action was taken because the serial dilution was not conducted on the sample in this SDG.

Nondetected results were reported to the MDL.

Executive Summary

Laboratory Performance: The VOC RRFs for tert-butyl alcohol and vinyl acetate were less than the quality control limit resulting in the rejection of nondetected results. The continuing calibration %D for trichlorofluoromethane was greater than 50%. The initial calibration %RSD for 1,4-dioxane was greater than 15%. The CRQL %Rs of several analytes were outside quality control limits.

Other Factors Affecting Data Quality: TICs containing siloxane were qualified as rejected. Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and Region III modifications to U.S.EPA National Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate

PROJ_NO: 04795	NSAMPLE	MRC-OF-06A-050113			MRC-OF-06B-050113			MRC-OF-06C-050113			MRC-OF08A-050113		
SDG: 240-23909-1	LAB_ID	240-23909-8			240-23909-6			240-23909-7			240-23909-1		
FRACTION: OV	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF08B-050113			MRC-OF08C-050113			MRC-OF08D-050113			MRC-OF-95D-050113		
SDG: 240-23909-1	LAB_ID	240-23909-3			240-23909-4			240-23909-5			240-23909-9		
FRACTION: OV	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	TB-050113
SDG: 240-23909-1	LAB_ID	240-23909-2
FRACTION: OV	SAMP_DATE	5/1/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U	
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U	
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.1	U	
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	
CARBON DISULFIDE	0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF-06A-050113			MRC-OF-06B-050113			MRC-OF-06C-050113			MRC-OF08A-050113		
SDG: 240-23909-1	LAB_ID	240-23909-8			240-23909-6			240-23909-7			240-23909-1		
FRACTION: OV	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)													
SILANOL, TRIMETHYL-		4.4	R	Z3	3	R	Z3						
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF08B-050113			MRC-OF08C-050113			MRC-OF08D-050113			MRC-OF-95D-050113		
SDG: 240-23909-1	LAB_ID	240-23909-3			240-23909-4			240-23909-5			240-23909-9		
FRACTION: OV	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.33	J	P
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)								3.2	R	Z3			
SILANOL, TRIMETHYL-					1.6	R	Z3				1.1	R	Z3
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	

PROJ_NO: 04795	NSAMPLE	TB-050113
SDG: 240-23909-1	LAB_ID	240-23909-2
FRACTION: OV	SAMP_DATE	5/1/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U	
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	U	
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)			
SILANOL, TRIMETHYL-	2.1	R	Z2
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	
TRICHLOROETHENE	0.17	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF-06A-050113			MRC-OF-06B-050113			MRC-OF-06C-050113			MRC-OF08A-050113		
SDG: 240-23909-1	LAB_ID	240-23909-8			240-23909-6			240-23909-7			240-23909-1		
FRACTION: OV	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	UJ	C	0.21	UJ	C	0.21	UJ	C	0.21	UJ	C
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF08B-050113			MRC-OF08C-050113			MRC-OF08D-050113			MRC-OF-95D-050113		
SDG: 240-23909-1	LAB_ID	240-23909-3			240-23909-4			240-23909-5			240-23909-9		
FRACTION: OV	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	UJ	C	0.21	UJ	C
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	TB-050113		
SDG: 240-23909-1	LAB_ID	240-23909-2		
FRACTION: OV	SAMP_DATE	5/1/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U	
VINYL ACETATE		0.19	UR	C
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-OF-95D-050113		
SDG: 240-23909-1	LAB_ID	240-23909-9		
FRACTION: M	SAMP_DATE	5/1/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.3	U	
ARSENIC		0.9	U	
BARIUM		11		
BERYLLIUM		0.25	J	P
CADMIUM		0.67	J	P
CHROMIUM		0.9	U	
COBALT		2.7		
COPPER		5.7		
LEAD		0.29	J	P
MERCURY		0.1	U	
MOLYBDENUM		0.25	J	P
NICKEL		6.7		
SELENIUM		0.5	U	
SILVER		0.1	J	CP
THALLIUM		0.2	U	
VANADIUM		0.8	U	
ZINC		8.7	J	P

PROJ_NO: 04795	NSAMPLE	MRC-OF-06A-050113			MRC-OF-06B-050113			MRC-OF-06C-050113			MRC-OF08A-050113		
SDG: 240-23909-1	LAB_ID	240-23909-8			240-23909-6			240-23909-7			240-23909-1		
FRACTION: OS	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	UJ	C	0.5	UJ	C	0.47	UJ	C	1.1	UJ	C

PROJ_NO: 04795	NSAMPLE	MRC-OF08B-050113			MRC-OF08C-050113			MRC-OF08D-050113			MRC-OF-95D-050113		
SDG: 240-23909-1	LAB_ID	240-23909-3			240-23909-4			240-23909-5			240-23909-9		
FRACTION: OS	SAMP_DATE	5/1/2013			5/1/2013			5/1/2013			5/1/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	UJ	C	0.49	UJ	C	0.49	UJ	C	0.47	UJ	C

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06A-050113 Lab Sample ID: 240-23909-8

Matrix: Water Lab File ID: UXM7951.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U *	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06A-050113 Lab Sample ID: 240-23909-8

Matrix: Water Lab File ID: UXM7951.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06A-050113 Lab Sample ID: 240-23909-8

Matrix: Water Lab File ID: UXM7951.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	74		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06A-050113 Lab Sample ID: 240-23909-8

Matrix: Water Lab File ID: UXM7951.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:10

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 17:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 1 TIC Result Total: 4.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	4.4	T J N

FORM I-TIC 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06B-050113 Lab Sample ID: 240-23909-6

Matrix: Water Lab File ID: UXM7949.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:52

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 16:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U *	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06B-050113 Lab Sample ID: 240-23909-6

Matrix: Water Lab File ID: UXM7949.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:52

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 16:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06B-050113 Lab Sample ID: 240-23909-6

Matrix: Water Lab File ID: UXM7949.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:52

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 16:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	73		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	74		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06B-050113 Lab Sample ID: 240-23909-6

Matrix: Water Lab File ID: UXM7949.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:52

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 16:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	3.0	T J N

FORM I-TIC 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06C-050113 | Lab Sample ID: 240-23909-7

Matrix: Water | Lab File ID: UXM7950.D

Analysis Method: 8260B | Date Collected: 05/01/2013 12:46

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 17:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U *	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06C-050113 | Lab Sample ID: 240-23909-7

Matrix: Water | Lab File ID: UXM7950.D

Analysis Method: 8260B | Date Collected: 05/01/2013 12:46

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 17:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06C-050113 | Lab Sample ID: 240-23909-7

Matrix: Water | Lab File ID: UXM7950.D

Analysis Method: 8260B | Date Collected: 05/01/2013 12:46

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 17:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	82		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		63-129
2037-26-5	Toluene-d8 (Surr)	79		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06C-050113 Lab Sample ID: 240-23909-7

Matrix: Water Lab File ID: UXM7950.D

Analysis Method: 8260B Date Collected: 05/01/2013 12:46

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 17:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-95D-050113 Lab Sample ID: 240-23909-9

Matrix: Water Lab File ID: UXM7952.D

Analysis Method: 8260B Date Collected: 05/01/2013 14:56

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	0.33	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U *	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-95D-050113 | Lab Sample ID: 240-23909-9

Matrix: Water | Lab File ID: UXM7952.D

Analysis Method: 8260B | Date Collected: 05/01/2013 14:56

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-95D-050113 Lab Sample ID: 240-23909-9

Matrix: Water Lab File ID: UXM7952.D

Analysis Method: 8260B Date Collected: 05/01/2013 14:56

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	100		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	83		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-95D-050113 Lab Sample ID: 240-23909-9

Matrix: Water Lab File ID: UXM7952.D

Analysis Method: 8260B Date Collected: 05/01/2013 14:56

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08A-050113 | Lab Sample ID: 240-23909-1

Matrix: Water | Lab File ID: UXM7944.D

Analysis Method: 8260B | Date Collected: 05/01/2013 15:20

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 15:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U *	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08A-050113 Lab Sample ID: 240-23909-1

Matrix: Water Lab File ID: UXM7944.D

Analysis Method: 8260B Date Collected: 05/01/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 15:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08A-050113 Lab Sample ID: 240-23909-1

Matrix: Water Lab File ID: UXM7944.D

Analysis Method: 8260B Date Collected: 05/01/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 15:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		66-117
1868-53-7	Dibromofluoromethane (Surr)	85		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		63-129
2037-26-5	Toluene-d8 (Surr)	74		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08A-050113 Lab Sample ID: 240-23909-1

Matrix: Water Lab File ID: UXM7944.D

Analysis Method: 8260B Date Collected: 05/01/2013 15:20

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 15:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08B-050113 Lab Sample ID: 240-23909-3

Matrix: Water Lab File ID: UXR4374.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:35

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08B-050113 | Lab Sample ID: 240-23909-3

Matrix: Water | Lab File ID: UXR4374.D

Analysis Method: 8260B | Date Collected: 05/01/2013 11:35

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08B-050113 Lab Sample ID: 240-23909-3

Matrix: Water Lab File ID: UXR4374.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:35

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	74		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		63-129
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08B-050113 Lab Sample ID: 240-23909-3

Matrix: Water Lab File ID: UXR4374.D

Analysis Method: 8260B Date Collected: 05/01/2013 11:35

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08C-050113 Lab Sample ID: 240-23909-4

Matrix: Water Lab File ID: UXR4375.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 18:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08C-050113 Lab Sample ID: 240-23909-4

Matrix: Water Lab File ID: UXR4375.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 18:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08C-050113 Lab Sample ID: 240-23909-4

Matrix: Water Lab File ID: UXR4375.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 18:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		66-117
1868-53-7	Dibromofluoromethane (Surr)	107		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	117		63-129
2037-26-5	Toluene-d8 (Surr)	98		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08C-050113 Lab Sample ID: 240-23909-4

Matrix: Water Lab File ID: UXR4375.D

Analysis Method: 8260B Date Collected: 05/01/2013 13:50

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 18:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.68	1.6	T J N

FORM I-TIC 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08D-050113 | Lab Sample ID: 240-23909-5

Matrix: Water | Lab File ID: UXM7948.D

Analysis Method: 8260B | Date Collected: 05/01/2013 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 16:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U *	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08D-050113 Lab Sample ID: 240-23909-5

Matrix: Water Lab File ID: UXM7948.D

Analysis Method: 8260B Date Collected: 05/01/2013 14:50

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 16:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08D-050113 | Lab Sample ID: 240-23909-5

Matrix: Water | Lab File ID: UXM7948.D

Analysis Method: 8260B | Date Collected: 05/01/2013 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 16:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	76		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
2037-26-5	Toluene-d8 (Surr)	75		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08D-050113 Lab Sample ID: 240-23909-5

Matrix: Water Lab File ID: UXM7948.D

Analysis Method: 8260B Date Collected: 05/01/2013 14:50

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 16:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
55644-10-5	Silanol, dimethyl(1,1,2-trimethylpropyl)	4.60	3.2	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: TB-050113 | Lab Sample ID: 240-23909-2

Matrix: Water | Lab File ID: UXR4373.D

Analysis Method: 8260B | Date Collected: 05/01/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 17:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: TB-050113 | Lab Sample ID: 240-23909-2

Matrix: Water | Lab File ID: UXR4373.D

Analysis Method: 8260B | Date Collected: 05/01/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 17:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: TB-050113 | Lab Sample ID: 240-23909-2

Matrix: Water | Lab File ID: UXR4373.D

Analysis Method: 8260B | Date Collected: 05/01/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 17:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
1868-53-7	Dibromofluoromethane (Surr)	102		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
2037-26-5	Toluene-d8 (Surr)	101		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: TB-050113 Lab Sample ID: 240-23909-2

Matrix: Water Lab File ID: UXR4373.D

Analysis Method: 8260B Date Collected: 05/01/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 17:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.68	2.1	T J N

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06A-050113 | Lab Sample ID: 240-23909-8

Matrix: Water | Lab File ID: 30509016.D

Analysis Method: 8270D | Date Collected: 05/01/2013 13:10

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:45

Sample wt/vol: 1010(mL) | Date Analyzed: 05/09/2013 16:19

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85244 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		20-110
367-12-4	2-Fluorophenol (Surr)	60		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	79		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	57		21-110
4165-62-2	Phenol-d5 (Surr)	65		21-110
1718-51-0	Terphenyl-d14 (Surr)	55		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06B-050113 | Lab Sample ID: 240-23909-6

Matrix: Water | Lab File ID: 30509010.D

Analysis Method: 8270D | Date Collected: 05/01/2013 11:52

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 980(mL) | Date Analyzed: 05/09/2013 13:21

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		20-110
367-12-4	2-Fluorophenol (Surr)	73		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	73		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	65		21-110
4165-62-2	Phenol-d5 (Surr)	71		21-110
1718-51-0	Terphenyl-d14 (Surr)	50		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-06C-050113 | Lab Sample ID: 240-23909-7

Matrix: Water | Lab File ID: 30509011.D

Analysis Method: 8270D | Date Collected: 05/01/2013 12:46

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 1040(mL) | Date Analyzed: 05/09/2013 13:45

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.96	U	0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		20-110
367-12-4	2-Fluorophenol (Surr)	74		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	72		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	67		21-110
4165-62-2	Phenol-d5 (Surr)	76		21-110
1718-51-0	Terphenyl-d14 (Surr)	54		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF-95D-050113 | Lab Sample ID: 240-23909-9

Matrix: Water | Lab File ID: 30509017.D

Analysis Method: 8270D | Date Collected: 05/01/2013 14:56

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:45

Sample wt/vol: 1050(mL) | Date Analyzed: 05/09/2013 16:45

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85244 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	61		20-110
367-12-4	2-Fluorophenol (Surr)	60		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	62		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	58		21-110
4165-62-2	Phenol-d5 (Surr)	64		21-110
1718-51-0	Terphenyl-d14 (Surr)	50		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08A-050113 | Lab Sample ID: 240-23909-1

Matrix: Water | Lab File ID: 30509006.D

Analysis Method: 8270D | Date Collected: 05/01/2013 15:20

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 460(mL) | Date Analyzed: 05/09/2013 11:46

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	2.2	U	2.2	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		20-110
367-12-4	2-Fluorophenol (Surr)	59		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	51		21-110
4165-62-2	Phenol-d5 (Surr)	58		21-110
1718-51-0	Terphenyl-d14 (Surr)	44		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08B-050113 | Lab Sample ID: 240-23909-3

Matrix: Water | Lab File ID: 30509007.D

Analysis Method: 8270D | Date Collected: 05/01/2013 11:35

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 990(mL) | Date Analyzed: 05/09/2013 12:10

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	46		20-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	58		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	49		21-110
4165-62-2	Phenol-d5 (Surr)	56		21-110
1718-51-0	Terphenyl-d14 (Surr)	47		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08C-050113 | Lab Sample ID: 240-23909-4

Matrix: Water | Lab File ID: 30509008.D

Analysis Method: 8270D | Date Collected: 05/01/2013 13:50

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 1000(mL) | Date Analyzed: 05/09/2013 12:34

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		20-110
367-12-4	2-Fluorophenol (Surr)	64		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	64		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	53		21-110
4165-62-2	Phenol-d5 (Surr)	60		21-110
1718-51-0	Terphenyl-d14 (Surr)	56		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: MRC-OF08D-050113 | Lab Sample ID: 240-23909-5

Matrix: Water | Lab File ID: 30509009.D

Analysis Method: 8270D | Date Collected: 05/01/2013 14:50

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 990(mL) | Date Analyzed: 05/09/2013 12:57

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	48		20-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	56		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	50		21-110
4165-62-2	Phenol-d5 (Surr)	57		21-110
1718-51-0	Terphenyl-d14 (Surr)	48		24-110

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-OF-95D-050113 Lab Sample ID: 240-23909-9

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG ID.:

Matrix: Water Date Sampled: 05/01/2013 14:56

Reporting Basis: WET Date Received: 05/02/2013 08:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.25	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.67	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	11	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	5.7	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	6.7	2.0	0.50	ug/L		B	1	6020
7439-92-1	Lead	0.29	1.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	2.7	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	0.10	1.0	0.10	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	8.7	20	4.0	ug/L	J		1	6020
7439-98-7	Molybdenum	0.25	10	0.20	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-OF-95D-050113 Lab Sample ID: 240-23909-9

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG ID.:

Matrix: Water Date Sampled: 05/01/2013 14:56

Reporting Basis: WET Date Received: 05/02/2013 08:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: 2013 MRC GW Sampling

Report Number: 240-23909-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and the 7470A Mercury analyses were performed at the TestAmerica Irvine laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT

The samples were received on 05/02/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 4.8 and 5.6C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-OF08A-050113 (240-23909-1), TB-050113 (240-23909-2), MRC-OF08B-050113 (240-23909-3), MRC-OF08C-050113 (240-23909-4), MRC-OF08D-050113 (240-23909-5), MRC-OF-06B-050113 (240-23909-6), MRC-OF-06C-050113 (240-23909-7), MRC-OF-06A-050113 (240-23909-8) and MRC-OF-95D-050113 (240-23909-9) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/13/2013 and 05/14/2013.

1,2,3-Trichlorobenzene and Methylene Chloride were detected in method blank MB 240-85830/6 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample(LCS) for batch 85619 recovered outside control limits for the following analyte(s): Isopropyl ether--has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

There was an MS/MSD analyzed in batch 85830 but could not be reported because the associated sample needed reanalyzed in a different batch for the following samples MRC-OF08B-050113 (240-23909-3), MRC-OF08C-050113 (240-23909-4), TB-050113 (240-23909-2).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MRC-OF08A-050113 (240-23909-1), MRC-OF08B-050113 (240-23909-3), MRC-OF08C-050113 (240-23909-4), MRC-OF08D-050113 (240-23909-5), MRC-OF-06B-050113 (240-23909-6), MRC-OF-06C-050113 (240-23909-7), MRC-OF-06A-050113 (240-23909-8) and MRC-OF-95D-050113 (240-23909-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 05/07/2013 and analyzed on 05/09/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 84947.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Sample MRC-OF-95D-050113 (240-23909-9) was analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared and analyzed on 05/09/2013.

Nickel was detected in method blank MB 440-103356/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample MRC-OF-95D-050113 (240-23909-9) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 05/16/2013.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

Method Summary

Client: Tetra Tech, Inc
Project/Site: 2013 MRC GW Sampling

TestAmerica Job ID: 240-23909-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL IRV
7470A	Mercury (CVAA)	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Sample Summary

Client: Tetra Tech, Inc
Project/Site: 2013 MRC GW Sampling

TestAmerica Job ID: 240-23909-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-23909-1	MRC-OF08A-050113	Water	05/01/13 15:20	05/02/13 08:45
240-23909-2	TB-050113	Water	05/01/13 00:00	05/02/13 08:45
240-23909-3	MRC-OF08B-050113	Water	05/01/13 11:35	05/02/13 08:45
240-23909-4	MRC-OF08C-050113	Water	05/01/13 13:50	05/02/13 08:45
240-23909-5	MRC-OF08D-050113	Water	05/01/13 14:50	05/02/13 08:45
240-23909-6	MRC-OF-06B-050113	Water	05/01/13 11:52	05/02/13 08:45
240-23909-7	MRC-OF-06C-050113	Water	05/01/13 12:46	05/02/13 08:45
240-23909-8	MRC-OF-06A-050113	Water	05/01/13 13:10	05/02/13 08:45
240-23909-9	MRC-OF-95D-050113	Water	05/01/13 14:56	05/02/13 08:45

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetra Tech	Tony Aparicio	5/1/13	124827
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
20251 Century Blvd Ste 200	(301) 528-5552		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Germantown / MD / 20874	Stu Cameron		
Project Name and Location (State)	**Carrier/Waybill Number**		
2013 MRC Gw Sampling			
Contract/Purchase Order/Quote No.			
112ICW4795			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: VOCs	1,4-Dioxane	Total metals	Special Instructions/ Conditions of Receipt
MRC-OF08A-050113	5/1/13	1520		X			1			3			X	X		
TB-050113	—	—		X						2			X			
MRC-OF08B-050113	5/1/13	1135		X			1			3			X	X		
MRC-OF08C-050113		1350		X			2			3			X	X		
MRC-OF08D-050113		1450		X			2			3			X	X		
MRC-OF-06B-050113		1152		X			2			3			X	X		
MRC-OF-06C-050113		1246		X			2			3			X	X		
MRC-OF-06A-050113		1310		X			1			3			X	X		
MRC-MW-95D-050113		1456		X			2		1	3			X	X	X	

240-23909 Chain of Custody

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Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.	[signature]	5-1-13	1600	[signature]	5/1/13	1600
2.	[signature]	5/1/13	1642	[signature]	5-2-13	845
3.	[signature]			[signature]		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

TestAmerica Canton Sample Receipt Form/Narrative Login # : 23909
Canton Facility

Client TetraTech Site Name

Cooler unpacked by: Derek D. Green

Cooler Received on 5-2-13 Opened on 5-2-13

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Multi Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -0 °C) Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	
IR GUN# 4G	(CF +1 °C) Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	☑ See Multiple Cooler Form
IR GUN# 5G	(CF +1 °C) Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	
IR GUN# 8	(CF +1 °C) Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Did all bottles arrive in good condition (Unbroken)?	Yes	No
7. Could all bottle labels be reconciled with the COC?	Yes	No
8. Were correct bottle(s) used for the test(s) indicated?	Yes	No
9. Sufficient quantity received to perform indicated analyses?	Yes	No
10. Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC379740
11. Were VOAs on the COC?	Yes	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
13. Was a trip blank present in the cooler(s)?	Yes	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: Derek D. Green

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____.

TestAmerica Multiple Cooler Receipt Form/Narrative **Login # :** 23909
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	46a	3.8	4.8	Ice
1	1	4.6	5.6	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-23909-1

Login Number: 23909
List Number: 1
Creator: King, Ronald

List Source: TestAmerica Irvine
List Creation: 05/03/13 01:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-23812-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/16/2013	5/16/2013	15	0	15
HG	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
HG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/3/2013	5/6/2013	4	3	7
HG	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/16/2013	5/16/2013	17	0	17
HG	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
HG	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/16/2013	5/16/2013	16	0	16
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/6/2013	2	5	7
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/2/2013	2	1	3
M	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/9/2013	5/9/2013	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
M	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/8/2013	5/8/2013	8	0	8
M	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/8/2013	5/8/2013	9	0	9
ALK	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
CL	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
DOC	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
NH3	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
NTA	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
NTI	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
OPO4	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	4/30/2013	4/30/2013	1	0	1
PCL	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/8/2013	5/9/2013	9	1	10
PCS	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
SO4	MG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/6/2013	5/6/2013	7	0	7
OS	UG/L	MRC-MW100A-043013	240-23844-2	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-MW-111A-042913	240-23812-6	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/3/2013	5/8/2013	4	5	9
OS	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/6/2013	5/9/2013	6	3	9
OS	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/3/2013	5/8/2013	4	5	9
OS	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/3/2013	5/7/2013	4	4	8
OS	UG/L	MRC-OF-06A-050113	240-23909-8	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-06B-050113	240-23909-6	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-06C-050113	240-23909-7	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF07-043013	240-23844-4	NM	4/30/2013	5/6/2013	5/8/2013	6	2	8
OS	UG/L	MRC-OF08A-050113	240-23909-1	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08B-050113	240-23909-3	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08C-050113	240-23909-4	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF08D-050113	240-23909-5	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/7/2013	5/9/2013	6	2	8
OS	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/6/2013	5/21/2013	6	15	21
OS	UG/L	MRC-OF04B-050713	240-24312-1	NM	5/9/2013	5/16/2013	5/18/2013	7	2	9
OV	UG/L	TB-050113	240-23909-2	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF07-043013	240-23844-4	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-OF08A-050113	240-23909-1	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF08B-050113	240-23909-3	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF08C-050113	240-23909-4	NM	5/1/2013	5/14/2013	5/14/2013	13	0	13
OV	UG/L	MRC-OF08D-050113	240-23909-5	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF-95D-050113	240-23909-9	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-OF-06C-050113	240-23909-7	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	TB-043013	240-23844-1	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9
OV	UG/L	MRC-MW-94D-043013	240-23844-5	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9
OV	UG/L	TB-042913	240-23812-1	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-111A-042913	240-23812-6	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW100A-043013	240-23844-2	NM	4/30/2013	5/14/2013	5/14/2013	14	0	14
OV	UG/L	MRC-MW98B-042913	240-23812-4	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW100B-043013	240-23844-3	NM	4/30/2013	5/13/2013	5/13/2013	13	0	13
OV	UG/L	MRC-OF-06B-050113	240-23909-6	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
OV	UG/L	MRC-MW-111B-042913	240-23812-7	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW41A-042913	240-23812-2	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-MW-93D-043013	240-23844-6	NM	4/30/2013	5/9/2013	5/9/2013	9	0	9

SORT	UNITS -	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-MW98A-042913	240-23812-3	NM	4/29/2013	5/9/2013	5/9/2013	10	0	10
OV	UG/L	MRC-OF-06A-050113	240-23909-8	NM	5/1/2013	5/13/2013	5/13/2013	12	0	12
ETHA	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
ETHE	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
METH	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3
OVG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/1/2013	5/1/2013	2	0	2
OVG	UG/L	MRC-MW-48A-042913	240-23812-5	NM	4/29/2013	5/2/2013	5/2/2013	3	0	3

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: BFB224.D BFB Injection Date: 05/07/2013

Instrument ID: A3UX17 BFB Injection Time: 11:36

Analysis Batch No.: 84979

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.8	
75	30.0 - 60.0 % of mass 95	46.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.4	(0.6)1
174	50.0 - 120.00 % of mass 95	75.7	
175	5.0 - 9.0 % of mass 174	5.3	(7.0)1
176	95.0 - 101.0 % of mass 174	76.1	(100.5)1
177	5.0 - 9.0 % of mass 176	4.8	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-84979/2	UXR4175.D	05/07/2013	11:59
	STD8260 240-84979/3	UXR4176.D	05/07/2013	12:21
	STD8260 240-84979/4	UXR4177.D	05/07/2013	12:44
	STD8260 240-84979/5	UXR4178.D	05/07/2013	13:06
	STD8260 240-84979/6	UXR4179.D	05/07/2013	13:29
	STD8260 240-84979/7	UXR4180.D	05/07/2013	13:51
	STDA9 240-84979/8	UXR4181.D	05/07/2013	14:13
	STDA9 240-84979/9	UXR4182.D	05/07/2013	14:35
	STDA9 240-84979/10	UXR4183.D	05/07/2013	14:57
	STDA9 240-84979/11	UXR4184.D	05/07/2013	15:20
	STDA9 240-84979/12	UXR4185.D	05/07/2013	15:42
	STDA9 240-84979/13	UXR4186.D	05/07/2013	16:05
	ICV 240-84979/14	UXR4187.D	05/07/2013	16:27

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-84979/7	UXR4180.D
Level 2	STD8260 240-84979/6	UXR4179.D
Level 3	STD8260 240-84979/5	UXR4178.D
Level 4	STD8260 240-84979/4	UXR4177.D
Level 5	STD8260 240-84979/3	UXR4176.D
Level 6	STD8260 240-84979/2	UXR4175.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2355 0.2706	0.2308	0.2416	0.2540	0.2889	Ave		0.2536				8.9		15.0			
Chloromethane	0.4734 0.4194	0.4323	0.4136	0.4135	0.4360	Ave		0.4314			0.1000	5.3		15.0			
Vinyl chloride	0.3868 0.3669	0.3503	0.3592	0.3628	0.3924	Ave		0.3697				4.4		15.0			
Bromomethane	0.1486 0.1101	0.1282	0.1179	0.1208	0.1248	Ave		0.1251				10.0		15.0			
Chloroethane	0.2513 0.1989	0.2159	0.2054	0.2028	0.2182	Ave		0.2154				8.9		15.0			
Trichlorofluoromethane	0.2227 0.2298	0.2110	0.2272	0.2404	0.2569	Ave		0.2313				6.8		15.0			
Acrolein	0.0514 0.0527	0.0512	0.0508	0.0520	0.0577	Ave		0.0526				4.9		15.0			
1,1-Dichloroethene	0.2465 0.2612	0.2513	0.2690	0.2681	0.2772	Ave		0.2622				4.4		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1758 0.1752	0.1414	0.1852	0.1869	0.1909	Ave		0.1759				10.0		15.0			
Acetone	0.3361 0.0867	0.1561	0.1117	0.1041	0.0969	Lin1	0.2590	0.0866							0.9980		0.9900
Iodomethane	0.3646 0.3891	0.3865	0.3927	0.4002	0.4114	Ave		0.3908				4.0		15.0			
Carbon disulfide	0.8209 0.8717	0.8178	0.8514	0.8776	0.9154	Ave		0.8591				4.3		15.0			
Acetonitrile	0.0501 0.0385	0.0425	0.0403	0.0402	0.0433	Ave		0.0425				9.7		15.0			
Methyl acetate	0.2447 0.2290	0.2283	0.2371	0.2351	0.2488	Ave		0.2372				3.5		15.0			
Methylene Chloride	0.7175 0.2922	0.4122	0.3278	0.3135	0.3181	Lin1	0.2168	0.2930							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0239 0.0219	0.0247	0.0248	0.0250	0.0256	Ave		0.0243				5.4		15.0			
Acrylonitrile	0.1245 0.1177	0.1175	0.1192	0.1206	0.1298	Ave		0.1215				3.9		15.0			
Methyl tert-butyl ether	0.7890 0.8108	0.8103	0.8249	0.8369	0.8658	Ave		0.8230				3.2		15.0			
trans-1,2-Dichloroethene	0.2859 0.2861	0.2881	0.2898	0.2955	0.3065	Ave		0.2920				2.7		15.0			
Hexane	0.0676 0.0716	0.0554	0.0702	0.0722	0.0722	Ave		0.0682				9.5		15.0			
1,1-Dichloroethane	0.4969 0.5312	0.5205	0.5144	0.5288	0.5544	Ave		0.5243			0.1000	3.7		15.0			
Vinyl acetate	0.0475 0.0584	0.0400	0.0486	0.0519	0.0569	Ave		0.0505				13.0		15.0			
2,2-Dichloropropane	0.2596 0.2751	0.2680	0.2775	0.2883	0.3015	Ave		0.2783				5.3		15.0			
cis-1,2-Dichloroethene	0.3036 0.3073	0.3104	0.3050	0.3111	0.3255	Ave		0.3105				2.6		15.0			
2-Butanone	0.1770 0.1295	0.1415	0.1327	0.1333	0.1393	Ave		0.1422				12.0		15.0			
Bromochloromethane	0.1303 0.1408	0.1421	0.1367	0.1399	0.1468	Ave		0.1394				4.0		15.0			
Tetrahydrofuran	0.1861 0.0890	0.1289	0.1060	0.1011	0.0980	Lin1	0.0562	0.0913							0.9970		0.9900
Chloroform	0.4513 0.4643	0.4583	0.4588	0.4727	0.4887	Ave		0.4657				2.9		15.0			
1,1,1-Trichloroethane	0.3476 0.3632	0.3450	0.3677	0.3715	0.3827	Ave		0.3629				4.0		15.0			
Cyclohexane	0.5464 0.5828	0.4652	0.5918	0.5990	0.6029	Ave		0.5647				9.3		15.0			
1,1-Dichloropropene	0.3654 0.3810	0.3551	0.3822	0.3848	0.3985	Ave		0.3778				4.1		15.0			
Carbon tetrachloride	0.2558 0.3143	0.2612	0.2924	0.3064	0.3201	Ave		0.2917				9.4		15.0			
Benzene	1.2323 1.1698	1.1620	1.1360	1.1660	1.2134	Ave		1.1799				3.0		15.0			
1,2-Dichloroethane	0.3551 0.3872	0.3897	0.3880	0.3927	0.4088	Ave		0.3869				4.5		15.0			
Trichloroethene	0.2620 0.2875	0.2708	0.2833	0.2843	0.2912	Ave		0.2799				4.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4904 0.4934	0.3894	0.5076	0.5154	0.5124	Ave		0.4848				9.9		15.0			
1,2-Dichloropropane	0.2649 0.2925	0.2834	0.2837	0.2885	0.3027	Ave		0.2859				4.4		15.0			
1,4-Dioxane	0.0027 0.0024	0.0031	0.0029	0.0030	0.0030	Ave		0.0028				9.4		15.0			
Dibromomethane	0.1402 0.1536	0.1511	0.1540	0.1568	0.1617	Ave		0.1529				4.7		15.0			
Bromodichloromethane	0.2860 0.3411	0.2964	0.3112	0.3198	0.3452	Ave		0.3166				7.5		15.0			
2-Chloroethyl vinyl ether	0.1650 0.1798	0.1627	0.1671	0.1725	0.1872	Ave		0.1724				5.5		15.0			
cis-1,3-Dichloropropene	0.3253 0.4446	0.3783	0.3940	0.4230	0.4547	Ave		0.4033				12.0		15.0			
4-Methyl-2-pentanone	0.2984 0.2815	0.2630	0.2727	0.2783	0.2999	Ave		0.2823				5.1		15.0			
Toluene	1.7134 1.5692	1.5364	1.5176	1.5124	1.5963	Ave		1.5742				4.8		15.0			
trans-1,3-Dichloropropene	0.3509 0.4890	0.3844	0.4223	0.4478	0.4855	Ave		0.4300				13.0		15.0			
Ethyl methacrylate	0.3917 0.4665	0.4073	0.4308	0.4481	0.4769	Ave		0.4369				7.6		15.0			
1,1,2-Trichloroethane	0.2790 0.2797	0.2752	0.2835	0.2807	0.2923	Ave		0.2817				2.1		15.0			
Tetrachloroethene	0.2780 0.2812	0.2580	0.2759	0.2746	0.2859	Ave		0.2756				3.5		15.0			
1,3-Dichloropropane	0.5120 0.5348	0.5237	0.5289	0.5252	0.5517	Ave		0.5294				2.5		15.0			
2-Hexanone	0.2406 0.2320	0.2216	0.2228	0.2232	0.2476	Ave		0.2313				4.7		15.0			
Dibromochloromethane	0.2646 0.3082	0.2428	0.2739	0.2845	0.3065	Ave		0.2801				9.0		15.0			
1,2-Dibromoethane	0.2530 0.2848	0.2769	0.2782	0.2787	0.2958	Ave		0.2779				5.1		15.0			
Chlorobenzene	0.9911 1.0215	1.0148	0.9932	1.0107	1.0528	Ave		1.0140			0.3000	2.2		15.0			
1,1,1,2-Tetrachloroethane	0.2977 0.3342	0.2991	0.3137	0.3215	0.3420	Ave		0.3180				5.7		15.0			
Ethylbenzene	0.4921 0.5485	0.5108	0.5255	0.5370	0.5656	Ave		0.5299				5.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6457 0.6946	0.6446	0.6659	0.6809	0.7110	Ave		0.6738				4.0		15.0			
o-Xylene	0.6134 0.6631	0.6114	0.6583	0.6557	0.6953	Ave		0.6495				4.9		15.0			
Styrene	0.9450 1.1555	1.0389	1.0792	1.1253	1.1801	Ave		1.0874				7.9		15.0			
Bromoform	0.1431 0.1921	0.1476	0.1586	0.1726	0.1887	Ave		0.1671			0.1000	12.0		15.0			
Isopropylbenzene	1.6240 1.7527	1.6238	1.6873	1.7253	1.8323	Ave		1.7076				4.7		15.0			
1,1,2,2-Tetrachloroethane	0.6666 0.6735	0.6773	0.6573	0.6820	0.7192	Ave		0.6793			0.3000	3.1		15.0			
Bromobenzene	0.6834 0.7450	0.7299	0.7496	0.7530	0.7967	Ave		0.7429				4.9		15.0			
1,2,3-Trichloropropane	0.2114 0.2130	0.2144	0.2164	0.2207	0.2327	Ave		0.2181				3.6		15.0			
trans-1,4-Dichloro-2-butene	0.1296 0.2009	0.1558	0.1543	0.1744	0.2047	Lin1	-0.059	0.1984							0.9950		0.9900
n-Propylbenzene	0.7683 0.8695	0.7749	0.8511	0.8630	0.9215	Ave		0.8414				7.0		15.0			
2-Chlorotoluene	0.7196 0.7255	0.6913	0.7230	0.7250	0.7825	Ave		0.7278				4.1		15.0			
1,3,5-Trimethylbenzene	2.2988 2.6539	2.3841	2.5454	2.6045	2.7912	Ave		2.5463				7.1		15.0			
4-Chlorotoluene	0.7510 0.7649	0.7327	0.7660	0.7678	0.8229	Ave		0.7676				3.9		15.0			
tert-Butylbenzene	2.2846 2.3326	2.1515	2.3115	2.3560	2.4994	Ave		2.3226				4.8		15.0			
1,2,4-Trimethylbenzene	2.4265 2.6920	2.4641	2.6132	2.6323	2.8575	Ave		2.6143				6.0		15.0			
sec-Butylbenzene	2.9288 3.2650	2.8781	3.2128	3.2083	3.4370	Ave		3.1550				6.7		15.0			
1,3-Dichlorobenzene	1.4880 1.4645	1.4587	1.4725	1.4756	1.5809	Ave		1.4900				3.1		15.0			
p-Isopropyltoluene	2.4515 2.7770	2.4445	2.6728	2.7606	2.9571	Ave		2.6772				7.5		15.0			
1,4-Dichlorobenzene	1.5393 1.5043	1.5181	1.5067	1.4875	1.6151	Ave		1.5285				3.0		15.0			
n-Butylbenzene	2.2095 2.4953	2.1839	2.4088	2.4614	2.6597	Ave		2.4031				7.5		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:59 Calibration End Date: 05/07/2013 13:51 Calibration ID: 15035

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4224 1.3693	1.3916	1.4052	1.3937	1.4838	Ave		1.4110				2.8		15.0			
1,2-Dibromo-3-Chloropropane	0.1115 0.1099	0.1019	0.1076	0.1103	0.1224	Ave		0.1106				6.1		15.0			
1,3,5-Trichlorobenzene	1.0968 0.9780	1.0641	1.0746	1.0703	1.1375	Ave		1.0702				4.9		15.0			
1,2,4-Trichlorobenzene	1.1246 0.7865	0.9817	0.9741	0.9640	1.0256	Ave		0.9761				11.0		15.0			
Hexachlorobutadiene	0.4553 0.3133	0.3818	0.4025	0.3894	0.4073	Ave		0.3916				12.0		15.0			
Naphthalene	2.5204 1.6869	2.1836	2.1729	2.2154	2.3572	Ave		2.1894				13.0		15.0			
1,2,3-Trichlorobenzene	1.1382	0.9416	0.8942	0.8898	0.8994	Ave		0.9526				11.0		15.0			
Dibromofluoromethane (Surr)	0.2029 0.2331	0.2162	0.2192	0.2291	0.2440	Ave		0.2241				6.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2843 0.2990	0.2927	0.2924	0.3010	0.3121	Ave		0.2969				3.2		15.0			
Toluene-d8 (Surr)	1.0919 1.2500	1.1912	1.1790	1.1959	1.2910	Ave		1.1998				5.7		15.0			
4-Bromofluorobenzene (Surr)	0.4560 0.4876	0.4865	0.4774	0.4758	0.5163	Ave		0.4833				4.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 14:13 Calibration End Date: 05/07/2013 16:05 Calibration ID: 15038

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-84979/13	UXR4186.D
Level 2	STDA9 240-84979/12	UXR4185.D
Level 3	STDA9 240-84979/11	UXR4184.D
Level 4	STDA9 240-84979/10	UXR4183.D
Level 5	STDA9 240-84979/9	UXR4182.D
Level 6	STDA9 240-84979/8	UXR4181.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4720 0.4666	0.4444	0.4425	0.4216	0.4511	Ave		0.4497				4.0		15.0			
Ethyl ether	0.2660 0.2823	0.2592	0.2598	0.2486	0.2724	Ave		0.2647				4.4		15.0			
3-Chloro-1-propene	0.1359 0.1610	0.1324	0.1370	0.1376	0.1525	Ave		0.1427				7.9		15.0			
Diisopropyl ether	0.2473 0.2740	0.2449	0.2495	0.2413	0.2619	Ave		0.2531				4.9		15.0			
2-Chloro-1,3-butadiene	0.4637 0.5263	0.4684	0.4797	0.4705	0.5114	Ave		0.4867				5.3		15.0			
Ethyl-t-butyl ether (ETBE)	0.9024 1.0209	0.8872	0.9050	0.8908	0.9641	Ave		0.9284				5.7		15.0			
Ethyl acetate	0.2738 0.2913	0.2604	0.2567	0.2603	0.2798	Ave		0.2704				5.0		15.0			
Propionitrile	0.0395 0.0446	0.0399	0.0413	0.0388	0.0444	Ave		0.0414				6.1		15.0			
Methacrylonitrile	0.2320 0.1962	0.2047	0.1845	0.1766	0.1935	Ave		0.1979				9.8		15.0			
Isobutyl alcohol	0.0129 0.0119	0.0118	0.0112	0.0113	0.0120	Ave		0.0118				4.9		15.0			
Tert-amyl-methyl ether (TAME)	0.7464 0.8505	0.7381	0.7539	0.7377	0.8150	Ave		0.7736				6.1		15.0			
n-Heptane	0.0701 0.0767	0.0672	0.0711	0.0682	0.0753	Ave		0.0714				5.4		15.0			
n-Butanol	0.0085 0.0102	0.0089	0.0092	0.0093	0.0103	Ave		0.0094				7.5		15.0			
Methyl methacrylate	0.2379 0.2805	0.2371	0.2462	0.2423	0.2654	Ave		0.2516				7.0		15.0			
2-Nitropropane	0.0556 0.0713	0.0560	0.0523	0.0573	0.0637	Ave		0.0594				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84979

SDG No.:

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 14:13 Calibration End Date: 05/07/2013 16:05 Calibration ID: 15038

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.1022 0.1284	0.1025	0.1176	0.1228	0.1393	Ave		0.1188				12.0		15.0			
1,2,3-Trimethylbenzene	2.3866 2.6962	2.4621	2.4926	2.4662	2.6461	Ave		2.5250				4.7		15.0			
2-Methylnaphthalene	1.5422	1.4901	1.2024	1.0735	0.7790	Ave		1.2174				26.0	*	15.0			
n-Butyl acetate	0.2099 0.2525	0.2109	0.2217	0.2175	0.2461	Ave		0.2264				8.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-84979/14 Calibration Date: 05/07/2013 16:27

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4187.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2536	0.2452		1.00	0.0100	-3.3	50.0
Chloromethane	Ave	0.4314	0.4245	0.1000	1.00	0.0100	-1.6	50.0
Vinyl chloride	Ave	0.3697	0.3705		1.00	0.0100	0.2	20.0
Bromomethane	Ave	0.1251	0.1178		1.00	0.0100	-5.8	50.0
Chloroethane	Ave	0.2154	0.2119		1.00	0.0100	-1.7	50.0
Trichlorofluoromethane	Ave	0.2313	0.2616		1.00	0.0100	13.1	50.0
Acrolein	Ave	0.0526	0.0452		20.0	0.0300	-14.1	50.0
1,1-Dichloroethene	Ave	0.2622	0.2745		1.00	0.0100	4.7	20.0
1,1,2-Trichloro-1,2,2-trichf luoroethane	Ave	0.1759	0.2144		1.00	0.0100	21.9	50.0
Acetone	Linl		0.0956		10.0	0.0200	-4.5	50.0
Iodomethane	Ave	0.3908	0.4086		1.00	0.0100	4.6	50.0
Carbon disulfide	Ave	0.8591	0.8602		1.00	0.0100	0.1	50.0
Acetonitrile	Ave	0.0425	0.0431		20.0	0.0300	1.4	50.0
Methyl acetate	Ave	0.2372	0.2672		10.0	0.0100	12.7	50.0
Methylene Chloride	Linl		0.3252		1.00	0.0100	3.6	50.0
tert-Butyl alcohol	Ave	0.0243	0.0254		50.0	0.200	4.5	50.0
Acrylonitrile	Ave	0.1215	0.1218		20.0	0.0300	0.2	50.0
Methyl tert-butyl ether	Ave	0.8230	0.8341		1.00	0.0100	1.4	50.0
trans-1,2-Dichloroethene	Ave	0.2920	0.2931		1.00	0.0100	0.4	50.0
Hexane	Ave	0.0682	0.0794		1.00	0.0100	16.3	20.0
1,1-Dichloroethane	Ave	0.5243	0.5428	0.1000	1.00	0.0100	3.5	50.0
Vinyl acetate	Ave	0.0505	0.0422		2.00	0.0100	-16.5	50.0
2,2-Dichloropropane	Ave	0.2783	0.2759		1.00	0.0100	-0.9	50.0
2-Butanone	Ave	0.1422	0.1342		10.0	0.0200	-5.7	50.0
cis-1,2-Dichloroethene	Ave	0.3105	0.3109		1.00	0.0100	0.1	50.0
Bromochloromethane	Ave	0.1394	0.1398		1.00	0.0100	0.3	50.0
Tetrahydrofuran	Linl		0.0952		5.00	0.0100	-1.8	50.0
Chloroform	Ave	0.4657	0.4729		1.00	0.0100	1.5	20.0
1,1,1-Trichloroethane	Ave	0.3629	0.3697		1.00	0.0100	1.9	50.0
Cyclohexane	Ave	0.5647	0.6076		1.00	0.0100	7.6	50.0
1,1-Dichloropropene	Ave	0.3778	0.3821		1.00	0.0100	1.1	50.0
Carbon tetrachloride	Ave	0.2917	0.3129		1.00	0.0100	7.3	50.0
Benzene	Ave	1.180	1.173		1.00	0.0100	-0.6	50.0
1,2-Dichloroethane	Ave	0.3869	0.4027		1.00	0.0100	4.1	50.0
Trichloroethene	Ave	0.2799	0.2972		1.00	0.0100	6.2	50.0
Methylcyclohexane	Ave	0.4848	0.5116		1.00	0.0100	5.5	50.0
1,2-Dichloropropane	Ave	0.2859	0.2969		1.00	0.0100	3.8	20.0
Dibromomethane	Ave	0.1529	0.1635		1.00	0.0100	6.9	50.0
Bromodichloromethane	Ave	0.3166	0.3309		1.00	0.0100	4.5	50.0
2-Chloroethyl vinyl ether	Ave	0.1724	0.1793		10.0	0.0100	4.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-84979/14 Calibration Date: 05/07/2013 16:27

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4187.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Ave	0.4033	0.4078		1.00	0.0100	1.1	50.0
4-Methyl-2-pentanone	Ave	0.2823	0.2838		10.0	0.0200	0.5	50.0
Toluene	Ave	1.574	1.515		1.00	0.0100	-3.8	20.0
trans-1,3-Dichloropropene	Ave	0.4300	0.4417		1.00	0.0100	2.7	50.0
1,1,2-Trichloroethane	Ave	0.2817	0.2897		1.00	0.0100	2.8	50.0
Tetrachloroethene	Ave	0.2756	0.2789		1.00	0.0100	1.2	50.0
1,3-Dichloropropane	Ave	0.5294	0.5344		1.00	0.0100	0.9	50.0
2-Hexanone	Ave	0.2313	0.2325		10.0	0.0200	0.5	50.0
Dibromochloromethane	Ave	0.2801	0.2783		1.00	0.0100	-0.6	50.0
1,2-Dibromoethane	Ave	0.2779	0.2817		1.00	0.0100	1.4	50.0
Chlorobenzene	Ave	1.014	1.006	0.3000	1.00	0.0100	-0.8	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3180	0.3127		1.00	0.0100	-1.7	50.0
Ethylbenzene	Ave	0.5299	0.5359		1.00	0.0100	1.1	20.0
m-Xylene & p-Xylene	Ave	0.6738	0.6749		2.00	0.0200	0.2	50.0
o-Xylene	Ave	0.6495	0.6559		1.00	0.0100	1.0	50.0
Styrene	Ave	1.087	1.139		1.00	0.0100	4.8	50.0
Bromoform	Ave	0.1671	0.1672	0.1000	1.00	0.0100	0.0	50.0
Isopropylbenzene	Ave	1.708	1.708		1.00	0.0100	0.0	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6793	0.6701	0.3000	1.00	0.0100	-1.4	50.0
Bromobenzene	Ave	0.7429	0.7446		1.00	0.0100	0.2	50.0
1,2,3-Trichloropropane	Ave	0.2181	0.2199		1.00	0.0100	0.8	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1576		1.00	0.0200	-19.1	50.0
n-Propylbenzene	Ave	0.8414	0.8818		1.00	0.0100	4.8	50.0
2-Chlorotoluene	Ave	0.7278	0.7262		1.00	0.0100	-0.2	50.0
1,3,5-Trimethylbenzene	Ave	2.546	2.591		1.00	0.0100	1.7	50.0
4-Chlorotoluene	Ave	0.7676	0.7478		1.00	0.0100	-2.6	50.0
tert-Butylbenzene	Ave	2.323	2.342		1.00	0.0100	0.8	50.0
1,2,4-Trimethylbenzene	Ave	2.614	2.630		1.00	0.0100	0.6	50.0
sec-Butylbenzene	Ave	3.155	3.188		1.00	0.0100	1.0	50.0
1,3-Dichlorobenzene	Ave	1.490	1.468		1.00	0.0100	-1.5	50.0
p-Isopropyltoluene	Ave	2.677	2.799		1.00	0.0100	4.6	50.0
1,4-Dichlorobenzene	Ave	1.529	1.484		1.00	0.0100	-2.9	50.0
n-Butylbenzene	Ave	2.403	2.445		1.00	0.0100	1.7	50.0
1,2-Dichlorobenzene	Ave	1.411	1.368		1.00	0.0100	-3.0	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1106	0.1077		2.00	0.0100	-2.6	50.0
1,2,4-Trichlorobenzene	Ave	0.9761	0.8063		1.00	0.0100	-17.4	50.0
Hexachlorobutadiene	Ave	0.3916	0.3321		1.00	0.0100	-15.2	50.0
Naphthalene	Ave	2.189	1.773		1.00	0.0100	-19.0	50.0
1,2,3-Trichlorobenzene	Ave	0.9526	0.6741		1.00	0.0100	-29.2	50.0
Dibromofluoromethane (Surr)	Ave	0.2241	0.2264		0.00900	0.00891	1.0	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2969	0.2949		0.00885	0.00891	-0.7	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-84979/14 Calibration Date: 05/07/2013 16:27

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4187.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.200	1.182		0.00878	0.00891	-1.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4833	0.4900		0.00903	0.00891	1.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-84979/14 Calibration Date: 05/07/2013 16:27

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 14:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 16:05

Lab File ID: UXR4187.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2647	0.2923		2.00	0.0100	10.4	50.0
Diisopropyl ether	Ave	0.2531	0.2688		10.0	0.0100	6.2	50.0
Isobutyl alcohol	Ave	0.0118	0.0114		50.0	0.500	-4.1	50.0
Cyclohexanone	Ave	0.1188	0.0244		20.0	0.200	-79.4*	50.0
1,2,3-Trimethylbenzene	Ave	2.525	2.636		0.0104	0.0100	4.4	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: BFB235.D BFB Injection Date: 05/14/2013

Instrument ID: A3UX17 BFB Injection Time: 12:25

Analysis Batch No.: 85830

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.8	
75	30.0 - 60.0 % of mass 95	53.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.5	(0.7)1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.0	(7.0)1
176	95.0 - 101.0 % of mass 174	71.4	(100.2)1
177	5.0 - 9.0 % of mass 176	4.5	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-85830/2	UXR4361.D	05/14/2013	12:55
	CCV 240-85830/3	UXR4362.D	05/14/2013	13:17
	LCS 240-85830/4	UXR4363.D	05/14/2013	13:39
	MB 240-85830/6	UXR4365.D	05/14/2013	14:24
TB-050113	240-23909-2	UXR4373.D	05/14/2013	17:24
MRC-OF08B-050113	240-23909-3	UXR4374.D	05/14/2013	17:46
MRC-OF08C-050113	240-23909-4	UXR4375.D	05/14/2013	18:09

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCVIS 240-85830/2 Calibration Date: 05/14/2013 12:55

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4361.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2536	0.3072		1.00	0.0100	21.2	50.0
Chloromethane	Ave	0.4314	0.4544	0.1000	1.00	0.0100	5.3	50.0
Vinyl chloride	Ave	0.3697	0.4041		1.00	0.0100	9.3	20.0
Bromomethane	Ave	0.1251	0.1565		1.00	0.0100	25.1	50.0
Chloroethane	Ave	0.2154	0.2081		1.00	0.0100	-3.4	50.0
Trichlorofluoromethane	Ave	0.2313	0.3389		1.00	0.0100	46.5	50.0
Acrolein	Ave	0.0526	0.0504		20.0	0.100	-4.2	50.0
1,1-Dichloroethene	Ave	0.2622	0.2999		1.00	0.0100	14.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1759	0.2279		1.00	0.0100	29.6	50.0
Acetone	Lin1		0.0936		10.0	0.0200	-6.8	50.0
Iodomethane	Ave	0.3908	0.4423		1.00	0.0100	13.2	50.0
Carbon disulfide	Ave	0.8591	0.9171		1.00	0.0100	6.8	50.0
Acetonitrile	Ave	0.0425	0.0398		20.0	0.100	-6.4	50.0
Methyl acetate	Ave	0.2372	0.2261		10.0	0.0200	-4.7	50.0
Methylene Chloride	Lin1		0.3444		1.00	0.0100	10.1	50.0
tert-Butyl alcohol	Ave	0.0243	0.0193		50.0	0.200	-20.5	50.0
Acrylonitrile	Ave	0.1215	0.1132		20.0	0.0200	-6.9	50.0
Methyl tert-butyl ether	Ave	0.8230	0.7823		1.00	0.0100	-4.9	50.0
trans-1,2-Dichloroethene	Ave	0.2920	0.3013		1.00	0.0100	3.2	50.0
Hexane	Ave	0.0682	0.0724		1.00	0.0100	6.2	20.0
1,1-Dichloroethane	Ave	0.5243	0.4897	0.1000	1.00	0.0100	-6.6	50.0
Vinyl acetate	Ave	0.0505	0.0464		2.00	0.0100	-8.2	50.0
2,2-Dichloropropane	Ave	0.2783	0.2653		1.00	0.0100	-4.7	50.0
2-Butanone	Ave	0.1422	0.1123		10.0	0.0200	-21.0	50.0
cis-1,2-Dichloroethene	Ave	0.3105	0.2945		1.00	0.0100	-5.2	50.0
Bromochloromethane	Ave	0.1394	0.1344		1.00	0.0100	-3.6	50.0
Tetrahydrofuran	Lin1		0.0739		5.00	0.0100	-25.2	50.0
Chloroform	Ave	0.4657	0.4597		1.00	0.0100	-1.3	20.0
1,1,1-Trichloroethane	Ave	0.3629	0.3758		1.00	0.0100	3.5	50.0
Cyclohexane	Ave	0.5647	0.5666		1.00	0.0100	0.3	50.0
1,1-Dichloropropene	Ave	0.3778	0.3794		1.00	0.0100	0.4	50.0
Carbon tetrachloride	Ave	0.2917	0.3453		1.00	0.0100	18.4	50.0
Benzene	Ave	1.180	1.157		1.00	0.0100	-1.9	50.0
1,2-Dichloroethane	Ave	0.3869	0.4056		1.00	0.0100	4.8	50.0
Trichloroethene	Ave	0.2799	0.2832		1.00	0.0100	1.2	50.0
Methylcyclohexane	Ave	0.4848	0.4923		1.00	0.0100	1.6	50.0
1,2-Dichloropropane	Ave	0.2859	0.2778		1.00	0.0100	-2.8	20.0
1,4-Dioxane	Ave	0.0028	0.0021		50.0	0.500	-26.0	50.0
Dibromomethane	Ave	0.1529	0.1459		1.00	0.0100	-4.6	50.0
Bromodichloromethane	Ave	0.3166	0.3276		1.00	0.0100	3.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCVIS 240-85830/2 Calibration Date: 05/14/2013 12:55

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4361.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1724	0.1625		10.0	0.0200	-5.8	50.0
cis-1,3-Dichloropropene	Ave	0.4033	0.4038		1.00	0.0100	0.1	50.0
4-Methyl-2-pentanone	Ave	0.2823	0.2330		10.0	0.0200	-17.5	50.0
Toluene	Ave	1.574	1.500		1.00	0.0100	-4.7	20.0
trans-1,3-Dichloropropene	Ave	0.4300	0.4298		1.00	0.0100	-0.0	50.0
Ethyl methacrylate	Ave	0.4369	0.3966		1.00	0.0100	-9.2	50.0
1,1,2-Trichloroethane	Ave	0.2817	0.2730		1.00	0.0100	-3.1	50.0
Tetrachloroethene	Ave	0.2756	0.2932		1.00	0.0100	6.4	50.0
1,3-Dichloropropane	Ave	0.5294	0.5239		1.00	0.0100	-1.0	50.0
2-Hexanone	Ave	0.2313	0.1923		10.0	0.0200	-16.9	50.0
Dibromochloromethane	Ave	0.2801	0.2811		1.00	0.0100	0.3	50.0
1,2-Dibromoethane	Ave	0.2779	0.2672		1.00	0.0100	-3.8	50.0
Chlorobenzene	Ave	1.014	0.9821	0.3000	1.00	0.0100	-3.1	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3180	0.3122		1.00	0.0100	-1.8	50.0
Ethylbenzene	Ave	0.5299	0.5324		1.00	0.0100	0.5	20.0
m-Xylene & p-Xylene	Ave	0.6738	0.6798		2.00	0.0200	0.9	50.0
o-Xylene	Ave	0.6495	0.6275		1.00	0.0100	-3.4	50.0
Styrene	Ave	1.087	1.099		1.00	0.0100	1.0	50.0
Bromoform	Ave	0.1671	0.1574	0.1000	1.00	0.0100	-5.8	50.0
Isopropylbenzene	Ave	1.708	1.611		1.00	0.0100	-5.7	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6793	0.5788	0.3000	1.00	0.0100	-14.8	50.0
Bromobenzene	Ave	0.7429	0.7171		1.00	0.0100	-3.5	50.0
1,2,3-Trichloropropane	Ave	0.2181	0.1993		1.00	0.0100	-8.6	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1782		1.00	0.0100	-7.2	50.0
n-Propylbenzene	Ave	0.8414	0.8420		1.00	0.0100	0.0	50.0
2-Chlorotoluene	Ave	0.7278	0.6880		1.00	0.0100	-5.5	50.0
1,3,5-Trimethylbenzene	Ave	2.546	2.548		1.00	0.0100	0.0	50.0
4-Chlorotoluene	Ave	0.7676	0.7690		1.00	0.0100	0.2	50.0
tert-Butylbenzene	Ave	2.323	2.091		1.00	0.0100	-10.0	50.0
1,2,4-Trimethylbenzene	Ave	2.614	2.569		1.00	0.0100	-1.7	50.0
sec-Butylbenzene	Ave	3.155	3.221		1.00	0.0100	2.1	50.0
1,3-Dichlorobenzene	Ave	1.490	1.457		1.00	0.0100	-2.2	50.0
p-Isopropyltoluene	Ave	2.677	2.680		1.00	0.0100	0.1	50.0
1,4-Dichlorobenzene	Ave	1.529	1.479		1.00	0.0100	-3.3	50.0
n-Butylbenzene	Ave	2.403	2.246		1.00	0.0100	-6.6	50.0
1,2-Dichlorobenzene	Ave	1.411	1.343		1.00	0.0100	-4.8	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1106	0.0796		2.00	0.0100	-28.1	50.0
1,3,5-Trichlorobenzene	Ave	1.070	0.9197		1.00	0.0100	-14.1	50.0
1,2,4-Trichlorobenzene	Ave	0.9761	0.7316		1.00	0.0100	-25.0	50.0
Hexachlorobutadiene	Ave	0.3916	0.3411		1.00	0.0100	-12.9	50.0
Naphthalene	Ave	2.189	1.389		1.00	0.0100	-36.6	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCVIS 240-85830/2 Calibration Date: 05/14/2013 12:55

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 11:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:51

Lab File ID: UXR4361.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.9526	0.5318		1.00	0.0100	-44.2	50.0
Dibromofluoromethane (Surr)	Ave	0.2241	0.2123		0.00844	0.00891	-5.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2969	0.2923		0.00877	0.00891	-1.6	50.0
Toluene-d8 (Surr)	Ave	1.200	1.186		0.00881	0.00891	-1.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.4833	0.4450		0.00821	0.00891	-7.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCV 240-85830/3 Calibration Date: 05/14/2013 13:17

Instrument ID: A3UX17 Calib Start Date: 05/07/2013 14:13

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 16:05

Lab File ID: UXR4362.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.4497	0.3685		2.00	0.0100	-18.1	50.0
Ethyl ether	Ave	0.2647	0.2342		2.00	0.0100	-11.5	50.0
3-Chloro-1-propene	Ave	0.1427	0.1280		2.00	0.0100	-10.3	50.0
Diisopropyl ether	Ave	0.2531	0.2358		10.0	0.0500	-6.8	50.0
2-Chloro-1,3-butadiene	Ave	0.4867	0.4448		2.00	0.0100	-8.6	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.9284	0.7414		5.00	0.0100	-20.1	50.0
Ethyl acetate	Ave	0.2704	0.2064		4.00	0.0200	-23.7	50.0
Propionitrile	Ave	0.0414	0.0303		4.00	0.0200	-26.8	50.0
Methacrylonitrile	Ave	0.1979	0.1430		2.00	0.0100	-27.7	50.0
Isobutyl alcohol	Ave	0.0118	0.0096		50.0	0.200	-19.3	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.7736	0.5953		5.00	0.0100	-23.0	50.0
n-Heptane	Ave	0.0714	0.0636		1.00	0.0100	-10.9	50.0
n-Butanol	Ave	0.0094	0.0065		50.0	0.200	-30.4	50.0
Methyl methacrylate	Ave	0.2516	0.1950		2.00	0.0100	-22.5	50.0
2-Nitropropane	Ave	0.0594	0.0452		2.00	0.0200	-23.8	50.0
Cyclohexanone	Ave	0.1188	0.0412		20.0	0.100	-65.3*	50.0
1,2,3-Trimethylbenzene	Ave	2.525	2.417		0.00957	0.0100	-4.3	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: UXR4365.D Lab Sample ID: MB 240-85830/6

Matrix: Water Heated Purge: (Y/N) N

Instrument ID: A3UX17 Date Analyzed: 05/14/2013 14:24

GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85830/4	UXR4363.D	05/14/2013 13:39
TB-050113	240-23909-2	UXR4373.D	05/14/2013 17:24
MRC-OF08B-050113	240-23909-3	UXR4374.D	05/14/2013 17:46
MRC-OF08C-050113	240-23909-4	UXR4375.D	05/14/2013 18:09

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85830/6

Matrix: Water | Lab File ID: UXR4365.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 14:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85830/6

Matrix: Water | Lab File ID: UXR4365.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 14:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	0.755	J	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	0.187	J	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85830/6

Matrix: Water | Lab File ID: UXR4365.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/14/2013 14:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85830 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		66-117
1868-53-7	Dibromofluoromethane (Surr)	103		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
2037-26-5	Toluene-d8 (Surr)	93		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85830/6

Matrix: Water Lab File ID: UXR4365.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/14/2013 14:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85830 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: BFB3402.D BFB Injection Date: 11/27/2012

Instrument ID: A3UX16 BFB Injection Time: 15:03

Analysis Batch No.: 66473

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.5	
75	30.0 - 60.0 % of mass 95	52.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.9	
175	5.0 - 9.0 % of mass 174	5.4	(7.3)1
176	95.0 - 101.0 % of mass 174	71.2	(95.1)1
177	5.0 - 9.0 % of mass 176	4.4	(6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-66473/8	UXM9089.D	11/27/2012	17:59
	STD2 240-66473/9	UXM9090.D	11/27/2012	18:22
	STD3 240-66473/10	UXM9091.D	11/27/2012	18:44
	STD4 240-66473/11	UXM9092.D	11/27/2012	19:07
	STD5 240-66473/12	UXM9093.D	11/27/2012	19:30
	STD6 240-66473/13	UXM9094.D	11/27/2012	19:53

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-66473/13	UXM9094.D
Level 2	STD5 240-66473/12	UXM9093.D
Level 3	STD4 240-66473/11	UXM9092.D
Level 4	STD3 240-66473/10	UXM9091.D
Level 5	STD2 240-66473/9	UXM9090.D
Level 6	STD1 240-66473/8	UXM9089.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.6395 0.5790	0.5949	0.6191	0.5701	0.5598	Ave		0.5937				5.1		15.0			
Ethyl ether	0.2957 0.2913	0.2805	0.3162	0.2908	0.2785	Ave		0.2922				4.6		15.0			
3-Chloro-1-propene	0.1657 0.1816	0.1589	0.1747	0.1684	0.1734	Ave		0.1704				4.6		15.0			
Diisopropyl ether	0.2885 0.3072	0.2714	0.3042	0.2883	0.2921	Ave		0.2920				4.4		15.0			
2-Chloro-1,3-butadiene	0.5541 0.6319	0.5394	0.6027	0.5733	0.5814	Ave		0.5805				5.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.9712 1.0865	0.9515	1.0602	1.0211	1.0411	Ave		1.0219				5.1		15.0			
Propionitrile	0.0336 0.0410	0.0390	0.0380	0.0379	0.0392	Ave		0.0381				6.4		15.0			
Ethyl acetate	0.2415 0.2708	0.2384	0.2467	0.2536	0.2545	Ave		0.2509				4.6		15.0			
Methacrylonitrile	0.2017 0.1992	0.1750	0.1941	0.1858	0.1896	Ave		0.1909				5.1		15.0			
Isobutyl alcohol	0.0071 0.0081	0.0070	0.0072	0.0075	0.0077	Ave		0.0074				5.5		15.0			
Tert-amyl-methyl ether (TAME)	0.7918 0.9098	0.8105	0.8835	0.8488	0.8716	Ave		0.8526				5.3		15.0			
n-Heptane	0.0550 0.0612	0.0566	0.0534	0.0500	0.0453	Ave		0.0536				10.0		15.0			
n-Butanol	0.0039 0.0055	0.0047	0.0054	0.0053	0.0055	Ave		0.0051				13.0		15.0			
Methyl methacrylate	0.2010 0.2422	0.1999	0.2231	0.2243	0.2270	Ave		0.2196				7.4		15.0			
2-Nitropropane	0.0355 +++++	0.0470	0.0403	0.0428	0.0485	Ave		0.0428				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 66473

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/27/2012 17:59 Calibration End Date: 11/27/2012 19:53 Calibration ID: 12519

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0937 0.0872	0.0965	0.1030	0.0923	0.0852	Ave		0.0930				6.9		15.0			
1,2,3-Trimethylbenzene	2.4010 2.9673	2.3401	2.6960	2.6868	2.7750	Ave		2.6444				8.9		15.0			
2-Methylnaphthalene	0.8663 +++++	1.0537	1.0510	0.9969	0.7520	Ave		0.9440				14.0		15.0			
n-Butyl acetate	0.3213 0.3680	0.3124	0.3343	0.3499	0.3540	Ave		0.3400				6.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: BFB3591.D BFB Injection Date: 05/11/2013

Instrument ID: A3UX16 BFB Injection Time: 15:38

Analysis Batch No.: 85563

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	49.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.5)1
176	95.0 - 101.0 % of mass 174	63.8	(96.4)1
177	5.0 - 9.0 % of mass 176	4.0	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-85563/2	UXM7902.D	05/11/2013	16:02
	STD8260 240-85563/3	UXM7903.D	05/11/2013	16:24
	STD8260 240-85563/4	UXM7904.D	05/11/2013	16:47
	STD8260 240-85563/5	UXM7905.D	05/11/2013	17:09
	STD8260 240-85563/6	UXM7906.D	05/11/2013	17:32
	STD8260 240-85563/7	UXM7907.D	05/11/2013	17:55
	ICV 240-85563/8	UXM7908.D	05/11/2013	18:18

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 85563

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2013 16:02 Calibration End Date: 05/11/2013 17:55 Calibration ID: 15161

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-85563/7	UXM7907.D
Level 2	STD8260 240-85563/6	UXM7906.D
Level 3	STD8260 240-85563/5	UXM7905.D
Level 4	STD8260 240-85563/4	UXM7904.D
Level 5	STD8260 240-85563/3	UXM7903.D
Level 6	STD8260 240-85563/2	UXM7902.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.4043 0.5130	0.3911	0.3727	0.4049	0.3736	Ave		0.4099				13.0		15.0			
Chloromethane	0.9406 0.8251	0.7823	0.7718	0.7416	0.6726	Ave		0.7890			0.1000	11.0		15.0			
Vinyl chloride	0.7040 0.7295	0.6166	0.6609	0.6230	0.5964	Ave		0.6551				8.1		15.0			
Bromomethane	0.2729 0.2573	0.2432	0.2156	0.2464	0.1821	Ave		0.2363				14.0		15.0			
Chloroethane	0.4347 0.4113	0.3859	0.3727	0.3705	0.3277	Ave		0.3838				9.6		15.0			
Trichlorofluoromethane	0.2874 0.3529	0.2580	0.2648	0.2813	0.2563	Ave		0.2834				13.0		15.0			
Acrolein	0.0504 0.0536	0.0450	0.0510	0.0508	0.0491	Ave		0.0500				5.7		15.0			
1,1-Dichloroethene	0.4542 0.4693	0.3866	0.4102	0.4060	0.4099	Ave		0.4227				7.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.2096 0.2661	0.1789	0.1793	0.2081	0.2034	Ave		0.2076				15.0		15.0			
Acetone	0.2268 0.0984	0.1348	0.1120	0.1002	0.0921	Lin1	0.2283	0.0917							0.9960		0.9900
Iodomethane	0.6195 0.6473	0.5516	0.5749	0.5676	0.5695	Ave		0.5884				6.2		15.0			
Carbon disulfide	1.3450 1.7513	1.1721	1.2854	1.3504	1.4208	Ave		1.3875				14.0		15.0			
Acetonitrile	0.0586 0.0482	0.0455	0.0466	0.0457	0.0442	Ave		0.0481				11.0		15.0			
Methyl acetate	0.3189 0.2553	0.2626	0.2568	0.2472	0.2424	Ave		0.2639				11.0		15.0			
Methylene Chloride	1.1398 0.5775	0.7562	0.6129	0.5458	0.5282	Lin1	0.5032	0.5362							0.9950		0.9900

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 85563

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2013 16:02 Calibration End Date: 05/11/2013 17:55 Calibration ID: 15161

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0149 0.0140	0.0131	0.0137	0.0139	0.0144	Ave		0.0140				4.3		15.0			
Acrylonitrile	0.1562 0.1377	0.1266	0.1357	0.1311	0.1263	Ave		0.1356				8.2		15.0			
Methyl tert-butyl ether	0.9401 1.0338	0.8390	0.8935	0.9159	0.9483	Ave		0.9284				7.0		15.0			
trans-1,2-Dichloroethene	0.4946 0.5107	0.4300	0.4583	0.4601	0.4478	Ave		0.4669				6.4		15.0			
Hexane	0.0625 0.0812	0.0564	0.0566	0.0566	0.0666	Ave		0.0633				15.0		15.0			
1,1-Dichloroethane	0.9062 0.9113	0.7742	0.8183	0.8007	0.8014	Ave		0.8353			0.1000	7.0		15.0			
Vinyl acetate	0.0406 0.0485	0.0301	0.0386	0.0408	0.0427	Ave		0.0402				15.0		15.0			
cis-1,2-Dichloroethene	0.4724 0.5029	0.4181	0.4429	0.4396	0.4410	Ave		0.4528				6.6		15.0			
2-Butanone	0.1587 0.1291	0.1279	0.1253	0.1240	0.1199	Ave		0.1308				11.0		15.0			
2,2-Dichloropropane	0.3432 0.4398	0.2993	0.3404	0.3510	0.3794	Ave		0.3588				13.0		15.0			
Bromochloromethane	0.1928 0.1903	0.1709	0.1775	0.1762	0.1744	Ave		0.1803				5.0		15.0			
Tetrahydrofuran	0.1270 0.0793	0.0906	0.0785	0.0783	0.0761	Lin1	0.0385	0.0763							0.9980		0.9900
Chloroform	0.7865 0.7705	0.6611	0.6864	0.6689	0.6745	Ave		0.7080				7.8		15.0			
1,1,1-Trichloroethane	0.4781 0.5927	0.4148	0.4699	0.4854	0.5044	Ave		0.4909				12.0		15.0			
Cyclohexane	0.7759 0.9768	0.6576	0.6795	0.7340	0.8065	Ave		0.7717				15.0		15.0			
1,1-Dichloropropene	0.5388 0.6045	0.4834	0.4990	0.5121	0.5295	Ave		0.5279				8.1		15.0			
Carbon tetrachloride	0.3101 0.4439	0.2815	0.3105	0.3410	0.3610	Qua	0.0278	0.2854	0.0039						1.0000		0.9900
1,2-Dichloroethane	0.5562 0.4984	0.4513	0.4505	0.4476	0.4506	Ave		0.4758				9.2		15.0			
Benzene	1.9625 2.0431	1.7233	1.7146	1.6986	1.7535	Ave		1.8159				8.2		15.0			
Trichloroethene	0.3714 0.3739	0.3131	0.3309	0.3204	0.3342	Ave		0.3406				7.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 85563

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2013 16:02 Calibration End Date: 05/11/2013 17:55 Calibration ID: 15161

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.4695 0.6922	0.4193	0.4492	0.4852	0.5581	Qua	-0.008	0.4211	0.0068						1.0000		0.9900
1,2-Dichloropropane	0.4242 0.4517	0.3622	0.3755	0.3778	0.4026	Ave		0.3990				8.5		15.0			
Dibromomethane	0.1831 0.1895	0.1651	0.1702	0.1723	0.1726	Ave		0.1755				5.1		15.0			
1,4-Dioxane	0.0027 0.0020	0.0025	0.0024	0.0024	0.0025	Ave		0.0024				8.9		15.0			
Bromodichloromethane	0.3417 0.4490	0.3071	0.3283	0.3436	0.3776	Ave		0.3579				14.0		15.0			
2-Chloroethyl vinyl ether	0.0870 0.1558	0.0867	0.0993	0.1111	0.1266	Qua	-0.049	0.0989	0.0007						1.0000		0.9900
cis-1,3-Dichloropropene	0.3439 0.5330	0.3255	0.3638	0.3889	0.4439	Qua	-0.059	0.3550	0.0045						1.0000		0.9900
4-Methyl-2-pentanone	0.1996 0.2525	0.1828	0.1988	0.2119	0.2229	Ave		0.2114				11.0		15.0			
Toluene	2.1097 2.4924	1.9122	2.0443	2.0529	2.1258	Ave		2.1229				9.2		15.0			
trans-1,3-Dichloropropene	0.3313 0.5039	0.3089	0.3511	0.3754	0.4248	Qua	-0.067	0.3468	0.0040						1.0000		0.9900
Ethyl methacrylate	0.3101 0.4697	0.2929	0.3303	0.3634	0.4054	Lin1	-0.264	0.4444							0.9900		0.9900
1,1,2-Trichloroethane	0.3766 0.3417	0.3192	0.3224	0.3108	0.3151	Ave		0.3310				7.5		15.0			
1,3-Dichloropropane	0.6989 0.6930	0.6163	0.6204	0.6126	0.6249	Ave		0.6444				6.2		15.0			
Tetrachloroethene	0.3321 0.3547	0.3062	0.3094	0.3042	0.3136	Ave		0.3200				6.2		15.0			
2-Hexanone	0.1641 0.1841	0.1576	0.1506	0.1580	0.1635	Ave		0.1630				7.0		15.0			
Dibromochloromethane	0.2258 0.3139	0.2015	0.2270	0.2425	0.2610	Qua	0.0057	0.2113	0.0026						1.0000		0.9900
1,2-Dibromoethane	0.2923 0.3123	0.2702	0.2798	0.2864	0.2827	Ave		0.2873				5.0		15.0			
Chlorobenzene	1.3320 1.4064	1.1869	1.2091	1.1896	1.2156	Ave		1.2566			0.3000	7.2		15.0			
1,1,1,2-Tetrachloroethane	0.3524 0.4519	0.3141	0.3556	0.3675	0.3836	Ave		0.3708				12.0		15.0			
Ethylbenzene	0.5918 0.7746	0.5347	0.6187	0.6346	0.6626	Ave		0.6362				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 85563

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2013 16:02 Calibration End Date: 05/11/2013 17:55 Calibration ID: 15161

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.7589 1.0129	0.7080	0.8011	0.8237	0.8636	Ave		0.8280				13.0		15.0			
o-Xylene	0.7561 1.0167	0.7489	0.8058	0.8480	0.8879	Ave		0.8439				12.0		15.0			
Styrene	1.1354 1.6823	1.1013	1.2525	1.3303	1.4137	Lin1	-0.847	1.5840							0.9900		0.9900
Bromoform	0.1220 0.1542	0.0909	0.1057	0.1138	0.1281	Qua	-0.006	0.1016	0.0013		0.1000				1.0000		0.9900
Isopropylbenzene	1.6834 2.4910	1.6585	1.8926	2.0058	2.1266	Lin1	-1.227	2.3597							0.9920		0.9900
1,1,2,2-Tetrachloroethane	0.8633 0.7751	0.7198	0.7339	0.6993	0.7323	Ave		0.7539			0.3000	7.8		15.0			
Bromobenzene	0.7936 0.8888	0.6981	0.7642	0.7522	0.7998	Ave		0.7828				8.1		15.0			
1,2,3-Trichloropropane	0.2333 0.2082	0.1939	0.1998	0.1958	0.2007	Ave		0.2053				7.1		15.0			
trans-1,4-Dichloro-2-butene	0.1885 0.1892	0.1483	0.1612	0.1597	0.1692	Ave		0.1693				9.7		15.0			
n-Propylbenzene	0.6542 0.9741	0.6423	0.7572	0.7925	0.8532	Lin1	-0.486	0.9307							0.9930		0.9900
2-Chlorotoluene	0.7316 0.9172	0.6611	0.7725	0.7780	0.8208	Ave		0.7802				11.0		15.0			
1,3,5-Trimethylbenzene	2.2705 3.4713	2.1698	2.6354	2.7549	2.9909	Lin1	-1.861	3.2971							0.9920		0.9900
4-Chlorotoluene	0.7723 0.9449	0.7082	0.8045	0.7974	0.8411	Ave		0.8114				9.7		15.0			
tert-Butylbenzene	1.9175 2.9717	1.9088	2.2023	2.2979	2.5613	Lin1	-1.613	2.8141							0.9910		0.9900
1,2,4-Trimethylbenzene	2.3237 3.5339	2.2884	2.7763	2.8773	3.0909	Lin1	-1.804	3.3789							0.9940		0.9900
sec-Butylbenzene	2.5346 3.8818	2.4649	2.8009	2.9712	3.2698	Qua	-0.307	2.6907	0.0300						1.0000		0.9900
1,3-Dichlorobenzene	1.6736 1.7333	1.4821	1.5050	1.5025	1.5704	Ave		1.5778				6.6		15.0			
p-Isopropyltoluene	2.0025 3.1721	1.9285	2.3617	2.4559	2.6720	Lin1	-1.788	2.9907							0.9900		0.9900
1,4-Dichlorobenzene	1.9423 1.7963	1.6067	1.5919	1.5707	1.6160	Ave		1.6873				8.8		15.0			
n-Butylbenzene	1.8902 2.8054	1.7512	2.0004	2.1808	2.3919	Qua	-0.389	2.0074	0.0202						1.0000		0.9900

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 85563

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2013 16:02 Calibration End Date: 05/11/2013 17:55 Calibration ID: 15161

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.6902 1.6399	1.5005	1.4980	1.5131	1.5138	Ave		1.5592				5.4		15.0			
1,2-Dibromo-3-Chloropropane	0.0750 0.0722	0.0533	0.0679	0.0677	0.0694	Ave		0.0676				11.0		15.0			
1,3,5-Trichlorobenzene	0.9705 0.9221	0.8485	0.8593	0.8635	0.8780	Ave		0.8903				5.3		15.0			
1,2,4-Trichlorobenzene	0.7217 0.7122	0.6602	0.6923	0.6890	0.7041	Ave		0.6966				3.1		15.0			
Hexachlorobutadiene	0.4206 0.3088	0.3659	0.3506	0.3486	0.3260	Ave		0.3534				11.0		15.0			
Naphthalene	1.1977 1.5588	1.1617	1.3237	1.4522	1.5840	Ave		1.3797				13.0		15.0			
1,2,3-Trichlorobenzene	0.6602 0.5548	0.5925	0.6124	0.6077	0.6010	Ave		0.6048				5.6		15.0			
Dibromofluoromethane (Surr)	0.3090 0.3324	0.2820	0.2892	0.2844	0.2863	Ave		0.2972				6.7		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4127 0.3967	0.3635	0.3617	0.3547	0.3511	Ave		0.3734				6.7		15.0			
Toluene-d8 (Surr)	1.5935 1.9482	1.5172	1.5870	1.5793	1.6511	Ave		1.6460				9.4		15.0			
4-Bromofluorobenzene (Surr)	0.5801 0.6865	0.5516	0.5888	0.5825	0.5878	Ave		0.5962				7.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-85563/8 Calibration Date: 05/11/2013 18:18

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM7908.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2922	0.3727		2.00	0.0100	27.6	50.0
Diisopropyl ether	Ave	0.2920	0.3592		10.0	0.0100	23.0	50.0
Isobutyl alcohol	Ave	0.0074	0.0064		50.0	0.500	-14.3	50.0
Cyclohexanone	Ave	0.0930	0.0135		20.0	0.200	-85.5*	50.0
1,2,3-Trimethylbenzene	Ave	2.644	3.012		0.0114	0.0100	13.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-85563/8 Calibration Date: 05/11/2013 18:18

Instrument ID: A3UX16 Calib Start Date: 05/11/2013 16:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/11/2013 17:55

Lab File ID: UXM7908.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4099	0.3531		1.00	0.0100	-13.9	50.0
Chloromethane	Ave	0.7890	0.6751	0.1000	1.00	0.0100	-14.4	50.0
Vinyl chloride	Ave	0.6551	0.6052		1.00	0.0100	-7.6	20.0
Bromomethane	Ave	0.2363	0.1834		1.00	0.0100	-22.4	50.0
Chloroethane	Ave	0.3838	0.3529		1.00	0.0100	-8.1	50.0
Trichlorofluoromethane	Ave	0.2834	0.2906		1.00	0.0100	2.5	50.0
Acrolein	Ave	0.0500	0.0510		20.0	0.0300	2.1	50.0
1,1-Dichloroethene	Ave	0.4227	0.4047		1.00	0.0100	-4.3	20.0
1,1,2-Trichloro-1,2,2-trichf luoroethane	Ave	0.2076	0.2509		1.00	0.0100	20.9	50.0
Acetone	Lin1		0.0985		10.0	0.0200	-5.0	50.0
Iodomethane	Ave	0.5884	0.5614		1.00	0.0100	-4.6	50.0
Carbon disulfide	Ave	1.387	1.335		1.00	0.0100	-3.8	50.0
Acetonitrile	Ave	0.0481	0.0495		20.0	0.0300	2.8	50.0
Methyl acetate	Ave	0.2639	0.2675		10.0	0.0100	1.4	50.0
Methylene Chloride	Lin1		0.5288		1.00	0.0100	-10.8	50.0
tert-Butyl alcohol	Ave	0.0140	0.0130		50.0	0.200	-7.1	50.0
Acrylonitrile	Ave	0.1356	0.1312		20.0	0.0300	-3.2	50.0
Methyl tert-butyl ether	Ave	0.9284	0.8909		1.00	0.0100	-4.0	50.0
trans-1,2-Dichloroethene	Ave	0.4669	0.4361		1.00	0.0100	-6.6	50.0
Hexane	Ave	0.0633	0.0813		1.00	0.0100	28.4*	20.0
1,1-Dichloroethane	Ave	0.8353	0.8102	0.1000	1.00	0.0100	-3.0	50.0
Vinyl acetate	Ave	0.0402	0.0444		2.00	0.0100	10.3	50.0
2-Butanone	Ave	0.1308	0.1244		10.0	0.0200	-4.9	50.0
cis-1,2-Dichloroethene	Ave	0.4528	0.4299		1.00	0.0100	-5.1	50.0
2,2-Dichloropropane	Ave	0.3588	0.3363		1.00	0.0100	-6.3	50.0
Bromochloromethane	Ave	0.1803	0.1709		1.00	0.0100	-5.2	50.0
Tetrahydrofuran	Lin1		0.0763		5.00	0.0100	-5.0	50.0
Chloroform	Ave	0.7080	0.6644		1.00	0.0100	-6.2	20.0
1,1,1-Trichloroethane	Ave	0.4909	0.4739		1.00	0.0100	-3.5	50.0
Cyclohexane	Ave	0.7717	0.8374		1.00	0.0100	8.5	50.0
1,1-Dichloropropene	Ave	0.5279	0.5255		1.00	0.0100	-0.5	50.0
Carbon tetrachloride	Qua		0.3467		1.00	0.0100	5.2	50.0
1,2-Dichloroethane	Ave	0.4758	0.4596		1.00	0.0100	-3.4	50.0
Benzene	Ave	1.816	1.722		1.00	0.0100	-5.2	50.0
Trichloroethene	Ave	0.3406	0.3258		1.00	0.0100	-4.4	50.0
1,2-Dichloropropane	Ave	0.3990	0.3906		1.00	0.0100	-2.1	20.0
Methylcyclohexane	Qua		0.5823		1.00	0.0100	16.6	50.0
Dibromomethane	Ave	0.1755	0.1752		1.00	0.0100	-0.2	50.0
Bromodichloromethane	Ave	0.3579	0.3511		1.00	0.0100	-1.9	50.0
2-Chloroethyl vinyl ether	Qua		0.1048		10.0	0.0100	3.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-85563/8 Calibration Date: 05/11/2013 18:18

Instrument ID: A3UX16 Calib Start Date: 05/11/2013 16:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/11/2013 17:55

Lab File ID: UXM7908.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Qua		0.3727		1.00	0.0100	-4.8	50.0
4-Methyl-2-pentanone	Ave	0.2114	0.2144		10.0	0.0200	1.4	50.0
Toluene	Ave	2.123	2.050		1.00	0.0100	-3.4	20.0
trans-1,3-Dichloropropene	Qua		0.3831		1.00	0.0100	0.8	50.0
1,1,2-Trichloroethane	Ave	0.3310	0.3307		1.00	0.0100	-0.0	50.0
1,3-Dichloropropane	Ave	0.6444	0.6285		1.00	0.0100	-2.5	50.0
Tetrachloroethene	Ave	0.3200	0.3146		1.00	0.0100	-1.7	50.0
2-Hexanone	Ave	0.1630	0.1601		10.0	0.0200	-1.7	50.0
Dibromochloromethane	Qua		0.2373		1.00	0.0100	-0.0	50.0
1,2-Dibromoethane	Ave	0.2873	0.2794		1.00	0.0100	-2.8	50.0
Chlorobenzene	Ave	1.257	1.201	0.3000	1.00	0.0100	-4.4	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3708	0.3605		1.00	0.0100	-2.8	50.0
Ethylbenzene	Ave	0.6362	0.6282		1.00	0.0100	-1.3	20.0
m-Xylene & p-Xylene	Ave	0.8280	0.8269		2.00	0.0200	-0.1	50.0
o-Xylene	Ave	0.8439	0.8390		1.00	0.0100	-0.6	50.0
Styrene	Lin1		1.343		1.00	0.0100	-9.8	50.0
Bromoform	Qua		0.1147	0.1000	1.00	0.0100	0.4	50.0
Isopropylbenzene	Lin1		1.975		1.00	0.0100	-11.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7539	0.7205	0.3000	1.00	0.0100	-4.4	50.0
Bromobenzene	Ave	0.7828	0.7603		1.00	0.0100	-2.9	50.0
1,2,3-Trichloropropane	Ave	0.2053	0.2080		1.00	0.0100	1.3	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1693	0.1666		1.00	0.0200	-1.7	50.0
n-Propylbenzene	Lin1		0.8247		1.00	0.0100	-6.2	50.0
2-Chlorotoluene	Ave	0.7802	0.7759		1.00	0.0100	-0.6	50.0
1,3,5-Trimethylbenzene	Lin1		2.716		1.00	0.0100	-12.0	50.0
4-Chlorotoluene	Ave	0.8114	0.8036		1.00	0.0100	-1.0	50.0
tert-Butylbenzene	Lin1		2.306		1.00	0.0100	-12.3	50.0
1,2,4-Trimethylbenzene	Lin1		2.857		1.00	0.0100	-10.1	50.0
sec-Butylbenzene	Qua		2.907		1.00	0.0100	-1.6	50.0
1,3-Dichlorobenzene	Ave	1.578	1.499		1.00	0.0100	-5.0	50.0
p-Isopropyltoluene	Lin1		2.528		1.00	0.0100	-9.5	50.0
1,4-Dichlorobenzene	Ave	1.687	1.563		1.00	0.0100	-7.4	50.0
n-Butylbenzene	Qua		2.137		1.00	0.0100	-1.4	50.0
1,2-Dichlorobenzene	Ave	1.559	1.477		1.00	0.0100	-5.3	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0676	0.0707		2.00	0.0100	4.6	50.0
1,2,4-Trichlorobenzene	Ave	0.6966	0.6019		1.00	0.0100	-13.6	50.0
Hexachlorobutadiene	Ave	0.3534	0.2817		1.00	0.0100	-20.3	50.0
Naphthalene	Ave	1.380	1.295		1.00	0.0100	-6.1	50.0
1,2,3-Trichlorobenzene	Ave	0.6048	0.5405		1.00	0.0100	-10.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2972	0.2636		0.00905	0.0102	-11.3	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3734	0.3350		0.00916	0.0102	-10.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-85563/8 Calibration Date: 05/11/2013 18:18

Instrument ID: A3UX16 Calib Start Date: 05/11/2013 16:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/11/2013 17:55

Lab File ID: UXM7908.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.646	1.498		0.00929	0.0102	-9.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5962	0.5658		0.00969	0.0102	-5.1	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: BFB3593.D BFB Injection Date: 05/13/2013

Instrument ID: A3UX16 BFB Injection Time: 09:23

Analysis Batch No.: 85619

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	48.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.7)1
174	50.0 - 120.00 % of mass 95	65.8	
175	5.0 - 9.0 % of mass 174	4.9	(7.5)1
176	95.0 - 101.0 % of mass 174	63.2	(96.0)1
177	5.0 - 9.0 % of mass 176	4.1	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-85619/2	UXM7932.D	05/13/2013	09:54
	CCV 240-85619/3	UXM7933.D	05/13/2013	10:17
	LCS 240-85619/4	UXM7934.D	05/13/2013	10:40
	MB 240-85619/6	UXM7936.D	05/13/2013	11:25
MRC-OF08A-050113	240-23909-1	UXM7944.D	05/13/2013	15:01
MRC-OF08D-050113	240-23909-5	UXM7948.D	05/13/2013	16:32
MRC-OF-06B-050113	240-23909-6	UXM7949.D	05/13/2013	16:55
MRC-OF-06C-050113	240-23909-7	UXM7950.D	05/13/2013	17:18
MRC-OF-06A-050113	240-23909-8	UXM7951.D	05/13/2013	17:41
MRC-OF-95D-050113	240-23909-9	UXM7952.D	05/13/2013	18:03
	240-24004-C-25 MS	UXM7957.D	05/13/2013	19:57
	240-24004-G-25 MSD	UXM7958.D	05/13/2013	20:20

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCVIS 240-85619/2 Calibration Date: 05/13/2013 09:54

Instrument ID: A3UX16 Calib Start Date: 05/11/2013 16:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/11/2013 17:55

Lab File ID: UXM7932.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4099	0.4545		1.00	0.0100	10.9	50.0
Chloromethane	Ave	0.7890	0.8337	0.1000	1.00	0.0100	5.7	50.0
Vinyl chloride	Ave	0.6551	0.6969		1.00	0.0100	6.4	20.0
Bromomethane	Ave	0.2363	0.2563		1.00	0.0100	8.5	50.0
Chloroethane	Ave	0.3838	0.4094		1.00	0.0100	6.7	50.0
Trichlorofluoromethane	Ave	0.2834	0.4611		1.00	0.0100	62.7*	50.0
Acrolein	Ave	0.0500	0.0533		20.0	0.100	6.7	50.0
1,1-Dichloroethene	Ave	0.4227	0.4619		1.00	0.0100	9.3	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.2076	0.2833		1.00	0.0100	36.5	50.0
Acetone	Lin1		0.0980		10.0	0.0200	-5.6	50.0
Iodomethane	Ave	0.5884	0.6555		1.00	0.0100	11.4	50.0
Carbon disulfide	Ave	1.387	1.634		1.00	0.0100	17.8	50.0
Acetonitrile	Ave	0.0481	0.0478		20.0	0.100	-0.8	50.0
Methyl acetate	Ave	0.2639	0.2594		10.0	0.0200	-1.7	50.0
Methylene Chloride	Lin1		0.6083		1.00	0.0100	4.1	50.0
tert-Butyl alcohol	Ave	0.0140	0.0149		50.0	0.200	6.3	50.0
Acrylonitrile	Ave	0.1356	0.1377		20.0	0.0200	1.5	50.0
Methyl tert-butyl ether	Ave	0.9284	1.053		1.00	0.0100	13.4	50.0
trans-1,2-Dichloroethene	Ave	0.4669	0.5239		1.00	0.0100	12.2	50.0
Hexane	Ave	0.0633	0.0774		1.00	0.0100	22.3*	20.0
1,1-Dichloroethane	Ave	0.8353	0.9147	0.1000	1.00	0.0100	9.5	50.0
Vinyl acetate	Ave	0.0402	0.0456		2.00	0.0100	13.5	50.0
2-Butanone	Ave	0.1308	0.1227		10.0	0.0200	-6.2	50.0
cis-1,2-Dichloroethene	Ave	0.4528	0.5044		1.00	0.0100	11.4	50.0
2,2-Dichloropropane	Ave	0.3588	0.4277		1.00	0.0100	19.2	50.0
Bromochloromethane	Ave	0.1803	0.1914		1.00	0.0100	6.1	50.0
Tetrahydrofuran	Lin1		0.0787		5.00	0.0100	-1.8	50.0
Chloroform	Ave	0.7080	0.7525		1.00	0.0100	6.3	20.0
1,1,1-Trichloroethane	Ave	0.4909	0.5824		1.00	0.0100	18.6	50.0
Cyclohexane	Ave	0.7717	0.9101		1.00	0.0100	17.9	50.0
1,1-Dichloropropene	Ave	0.5279	0.5785		1.00	0.0100	9.6	50.0
Carbon tetrachloride	Qua		0.4285		1.00	0.0100	26.9	50.0
1,2-Dichloroethane	Ave	0.4758	0.4688		1.00	0.0100	-1.5	50.0
Benzene	Ave	1.816	1.861		1.00	0.0100	2.5	50.0
Trichloroethene	Ave	0.3406	0.3534		1.00	0.0100	3.7	50.0
Methylcyclohexane	Qua		0.6193		1.00	0.0100	22.9	50.0
1,2-Dichloropropane	Ave	0.3990	0.4122		1.00	0.0100	3.3	20.0
Dibromomethane	Ave	0.1755	0.1761		1.00	0.0100	0.4	50.0
1,4-Dioxane	Ave	0.0024	0.0020		50.0	0.500	-15.8	50.0
Bromodichloromethane	Ave	0.3579	0.3974		1.00	0.0100	11.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCVIS 240-85619/2 Calibration Date: 05/13/2013 09:54

Instrument ID: A3UX16 Calib Start Date: 05/11/2013 16:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/11/2013 17:55

Lab File ID: UXM7932.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Qua		0.1095		10.0	0.0200	-1.1	50.0
cis-1,3-Dichloropropene	Qua		0.4127		1.00	0.0100	4.2	50.0
4-Methyl-2-pentanone	Ave	0.2114	0.2128		10.0	0.0200	0.6	50.0
Toluene	Ave	2.123	2.141		1.00	0.0100	0.9	20.0
trans-1,3-Dichloropropene	Qua		0.4120		1.00	0.0100	7.5	50.0
Ethyl methacrylate	Lin1		0.3906		1.00	0.0100	-6.2	50.0
1,1,2-Trichloroethane	Ave	0.3310	0.3130		1.00	0.0100	-5.4	50.0
1,3-Dichloropropane	Ave	0.6444	0.6170		1.00	0.0100	-4.2	50.0
Tetrachloroethene	Ave	0.3200	0.3216		1.00	0.0100	0.5	50.0
2-Hexanone	Ave	0.1630	0.1704		10.0	0.0200	4.5	50.0
Dibromochloromethane	Qua		0.2709		1.00	0.0100	12.6	50.0
1,2-Dibromoethane	Ave	0.2873	0.2915		1.00	0.0100	1.5	50.0
Chlorobenzene	Ave	1.257	1.272	0.3000	1.00	0.0100	1.2	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3708	0.4210		1.00	0.0100	13.5	50.0
Ethylbenzene	Ave	0.6362	0.7059		1.00	0.0100	11.0	20.0
m-Xylene & p-Xylene	Ave	0.8280	0.9295		2.00	0.0200	12.3	50.0
o-Xylene	Ave	0.8439	0.9387		1.00	0.0100	11.2	50.0
Styrene	Lin1		1.492		1.00	0.0100	-0.5	50.0
Bromoform	Qua		0.1518	0.1000	1.00	0.0100	28.6	50.0
Isopropylbenzene	Lin1		2.240		1.00	0.0100	0.1	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7539	0.7622	0.3000	1.00	0.0100	1.1	50.0
Bromobenzene	Ave	0.7828	0.8247		1.00	0.0100	5.4	50.0
1,2,3-Trichloropropane	Ave	0.2053	0.2087		1.00	0.0100	1.6	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1693	0.1710		1.00	0.0100	1.0	50.0
n-Propylbenzene	Lin1		0.8834		1.00	0.0100	0.1	50.0
2-Chlorotoluene	Ave	0.7802	0.8524		1.00	0.0100	9.3	50.0
1,3,5-Trimethylbenzene	Lin1		3.047		1.00	0.0100	-1.9	50.0
4-Chlorotoluene	Ave	0.8114	0.9139		1.00	0.0100	12.6	50.0
tert-Butylbenzene	Lin1		2.327		1.00	0.0100	-11.6	50.0
1,2,4-Trimethylbenzene	Lin1		3.214		1.00	0.0100	0.5	50.0
sec-Butylbenzene	Qua		3.342		1.00	0.0100	11.5	50.0
1,3-Dichlorobenzene	Ave	1.578	1.679		1.00	0.0100	6.4	50.0
p-Isopropyltoluene	Lin1		2.798		1.00	0.0100	-0.5	50.0
1,4-Dichlorobenzene	Ave	1.687	1.732		1.00	0.0100	2.6	50.0
n-Butylbenzene	Qua		2.496		1.00	0.0100	13.3	50.0
1,2-Dichlorobenzene	Ave	1.559	1.632		1.00	0.0100	4.7	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.0676	0.0761		2.00	0.0100	12.7	50.0
1,3,5-Trichlorobenzene	Ave	0.8903	0.9366		1.00	0.0100	5.2	50.0
1,2,4-Trichlorobenzene	Ave	0.6966	0.7182		1.00	0.0100	3.1	50.0
Hexachlorobutadiene	Ave	0.3534	0.3443		1.00	0.0100	-2.6	50.0
Naphthalene	Ave	1.380	1.446		1.00	0.0100	4.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCVIS 240-85619/2 Calibration Date: 05/13/2013 09:54

Instrument ID: A3UX16 Calib Start Date: 05/11/2013 16:02

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/11/2013 17:55

Lab File ID: UXM7932.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.6048	0.5997		1.00	0.0100	-0.8	50.0
Dibromofluoromethane (Surr)	Ave	0.2972	0.2687		0.00923	0.0102	-9.6	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3734	0.3150		0.00861	0.0102	-15.6	50.0
Toluene-d8 (Surr)	Ave	1.646	1.443		0.00895	0.0102	-12.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5962	0.5828		0.00998	0.0102	-2.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCV 240-85619/3 Calibration Date: 05/13/2013 10:17

Instrument ID: A3UX16 Calib Start Date: 11/27/2012 17:59

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 11/27/2012 19:53

Lab File ID: UXM7933.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5937	0.6584		2.00	0.0100	10.9	50.0
Ethyl ether	Ave	0.2922	0.3263		2.00	0.0100	11.7	50.0
3-Chloro-1-propene	Ave	0.1704	0.2034		2.00	0.0100	19.3	50.0
Diisopropyl ether	Ave	0.2920	0.3635		10.0	0.0500	24.5	50.0
2-Chloro-1,3-butadiene	Ave	0.5805	0.6429		2.00	0.0100	10.8	50.0
Ethyl-t-butyl ether (ETBE)	Ave	1.022	1.036		5.00	0.0100	1.4	50.0
Propionitrile	Ave	0.0381	0.0377		4.00	0.0200	-1.1	50.0
Ethyl acetate	Ave	0.2509	0.2026		4.00	0.0200	-19.3	50.0
Methacrylonitrile	Ave	0.1909	0.1601		2.00	0.0100	-16.1	50.0
Isobutyl alcohol	Ave	0.0074	0.0058		50.0	0.200	-22.3	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.8526	0.7453		5.00	0.0100	-12.6	50.0
n-Heptane	Ave	0.0536	0.0481		1.00	0.0100	-10.2	50.0
n-Butanol	Ave	0.0051	0.0040		50.0	0.200	-21.7	50.0
Methyl methacrylate	Ave	0.2196	0.1588		2.00	0.0100	-27.7	50.0
2-Nitropropane	Ave	0.0428	0.0288		2.00	0.0200	-32.7	50.0
Cyclohexanone	Ave	0.0930	0.0829		20.0	0.100	-10.8	50.0
1,2,3-Trimethylbenzene	Ave	2.644	2.975		0.0112	0.0100	12.5	50.0
2-Methylnaphthalene	Ave	0.9440	0.4862		5.00	0.0200	-48.5	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: UXM7936.D Lab Sample ID: MB 240-85619/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/13/2013 11:25

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85619/4	UXM7934.D	05/13/2013 10:40
MRC-OF08A-050113	240-23909-1	UXM7944.D	05/13/2013 15:01
MRC-OF08D-050113	240-23909-5	UXM7948.D	05/13/2013 16:32
MRC-OF-06B-050113	240-23909-6	UXM7949.D	05/13/2013 16:55
MRC-OF-06C-050113	240-23909-7	UXM7950.D	05/13/2013 17:18
MRC-OF-06A-050113	240-23909-8	UXM7951.D	05/13/2013 17:41
MRC-OF-95D-050113	240-23909-9	UXM7952.D	05/13/2013 18:03
	240-24004-C-25 MS	UXM7957.D	05/13/2013 19:57
	240-24004-G-25 MSD	UXM7958.D	05/13/2013 20:20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85619/6

Matrix: Water | Lab File ID: UXM7936.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 11:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85619/6

Matrix: Water | Lab File ID: UXM7936.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 11:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85619/6

Matrix: Water | Lab File ID: UXM7936.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/13/2013 11:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 85619 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		63-129
2037-26-5	Toluene-d8 (Surr)	74		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-85619/6

Matrix: Water Lab File ID: UXM7936.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/13/2013 11:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 85619 Units: ug/L

Number TICs Found: 1 TIC Result Total: 7.31

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
71-36-3	n-Butanol	5.93	7.31	J

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MRC-OF08A-050113	240-23909-1	85	85	74	74
TB-050113	240-23909-2	102	106	101	97
MRC-OF08B-050113	240-23909-3	84	94	96	74
MRC-OF08C-050113	240-23909-4	107	117	98	93
MRC-OF08D-050113	240-23909-5	89	89	75	76
MRC-OF-06B-050113	240-23909-6	87	89	74	73
MRC-OF-06C-050113	240-23909-7	97	97	79	82
MRC-OF-06A-050113	240-23909-8	88	89	74	74
MRC-OF-95D-050113	240-23909-9	100	103	83	83
	MB 240-85619/6	84	85	74	79
	MB 240-85830/6	103	103	93	103
	LCS 240-85619/4	80	78	82	90
	LCS 240-85830/4	101	100	100	104
	240-24004-C-25 MS	92	95	94	98
	240-24004-G-25 MSD	85	81	80	95

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7934.D

Lab ID: LCS 240-85619/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	17.9	90	43-136	
Benzene	10.0	8.74	87	83-112	
Bromobenzene	10.0	8.96	90	76-115	
Bromochloromethane	10.0	8.87	89	77-120	
Bromodichloromethane	10.0	9.37	94	72-121	
Bromoform	10.0	10.4	104	40-131	
Bromomethane	10.0	7.26	73	11-185	
2-Butanone	20.0	17.0	85	60-126	
Carbon disulfide	10.0	9.03	90	62-142	
Carbon tetrachloride	10.0	10.3	103	66-128	
Chlorobenzene	10.0	8.93	89	85-110	
Chloroethane	10.0	8.22	82	25-153	
2-Chloroethyl vinyl ether	10.0	9.24 J	92	52-131	
Chloroform	10.0	8.81	88	79-117	
Chloromethane	10.0	7.61	76	44-126	
2-Chlorotoluene	10.0	9.19	92	76-116	
4-Chlorotoluene	10.0	9.38	94	77-115	
cis-1,2-Dichloroethene	10.0	9.09	91	80-113	
cis-1,3-Dichloropropene	10.0	8.86	89	61-115	
Dibromochloromethane	10.0	10.0	100	64-119	
1,2-Dibromo-3-Chloropropane	10.0	9.98	100	42-136	
1,2-Dibromoethane	10.0	9.10	91	79-113	
Dibromomethane	10.0	9.04	90	81-120	
1,2-Dichlorobenzene	10.0	8.82	88	81-110	
1,3-Dichlorobenzene	10.0	8.91	89	80-110	
1,4-Dichlorobenzene	10.0	8.67	87	82-110	
Dichlorodifluoromethane	10.0	5.82	58	19-129	
1,1-Dichloroethane	10.0	9.18	92	82-115	
1,2-Dichloroethane	10.0	8.96	90	71-127	
1,1-Dichloroethene	10.0	8.85	88	78-131	
1,2-Dichloropropane	10.0	8.93	89	81-115	
1,3-Dichloropropane	10.0	8.82	88	79-116	
2,2-Dichloropropane	10.0	9.42	94	50-129	
1,1-Dichloropropene	10.0	9.18	92	83-114	
Diisopropyl ether	10.0	12.2	122	77-118	*
Ethylbenzene	10.0	9.42	94	83-112	
Hexachlorobutadiene	10.0	7.69	77	36-134	
2-Hexanone	20.0	19.4	97	55-133	
Isopropylbenzene	10.0	8.72	87	75-114	
Methylene Chloride	10.0	8.27	83	66-131	
4-Methyl-2-pentanone	20.0	18.3	91	63-128	
Methyl tert-butyl ether	10.0	9.47	95	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7934.D

Lab ID: LCS 240-85619/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.0	95	83-113	
Naphthalene	10.0	9.41	94	32-141	
n-Butylbenzene	10.0	9.56	96	66-125	
n-Propylbenzene	10.0	8.73	87	74-121	
o-Xylene	10.0	9.81	98	83-113	
p-Isopropyltoluene	10.0	8.58	86	74-120	
sec-Butylbenzene	10.0	9.25	93	70-117	
Styrene	10.0	8.70	87	79-114	
tert-Butyl alcohol	200	190	95	70-130	
tert-Butylbenzene	10.0	8.19	82	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.84	98	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.45	85	68-118	
Tetrachloroethene	10.0	8.88	89	79-114	
Toluene	10.0	8.98	90	84-111	
trans-1,2-Dichloroethene	10.0	8.89	89	83-117	
trans-1,3-Dichloropropene	10.0	9.77	98	58-117	
1,2,3-Trichlorobenzene	10.0	8.69	87	54-126	
1,2,4-Trichlorobenzene	10.0	8.51	85	48-135	
1,1,1-Trichloroethane	10.0	9.24	92	74-118	
Trichloroethene	10.0	9.01	90	76-117	
Trichlorofluoromethane	10.0	11.9	119	49-157	
1,2,3-Trichloropropane	10.0	8.91	89	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.5	115	74-151	
1,2,3-Trimethylbenzene	10.0	10.7	107	70-130	
1,2,4-Trimethylbenzene	10.0	8.42	84	76-120	
Vinyl acetate	10.0	10.3	103	46-161	
Vinyl chloride	10.0	8.00	80	53-127	
Xylenes, Total	30.0	28.8	96	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4363.D

Lab ID: LCS 240-85830/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.5	92	43-136	
Benzene	10.0	9.74	97	83-112	
Bromobenzene	10.0	9.12	91	76-115	
Bromochloromethane	10.0	9.28	93	77-120	
Bromodichloromethane	10.0	10.6	106	72-121	
Bromoform	10.0	9.33	93	40-131	
Bromomethane	10.0	11.2	112	11-185	
2-Butanone	20.0	15.8	79	60-126	
Carbon disulfide	10.0	10.5	105	62-142	
Carbon tetrachloride	10.0	11.9	119	66-128	
Chlorobenzene	10.0	10.0	100	85-110	
Chloroethane	10.0	9.60	96	25-153	
2-Chloroethyl vinyl ether	10.0	8.99 J	90	52-131	
Chloroform	10.0	9.97	100	79-117	
Chloromethane	10.0	9.64	96	44-126	
2-Chlorotoluene	10.0	9.44	94	76-116	
4-Chlorotoluene	10.0	9.47	95	77-115	
cis-1,2-Dichloroethene	10.0	9.60	96	80-113	
cis-1,3-Dichloropropene	10.0	9.33	93	61-115	
Dibromochloromethane	10.0	9.53	95	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.07	81	42-136	
1,2-Dibromoethane	10.0	9.72	97	79-113	
Dibromomethane	10.0	9.88	99	81-120	
1,2-Dichlorobenzene	10.0	9.58	96	81-110	
1,3-Dichlorobenzene	10.0	9.30	93	80-110	
1,4-Dichlorobenzene	10.0	9.20	92	82-110	
Dichlorodifluoromethane	10.0	8.63	86	19-129	
1,1-Dichloroethane	10.0	9.48	95	82-115	
1,2-Dichloroethane	10.0	10.9	109	71-127	
1,1-Dichloroethene	10.0	11.5	115	78-131	
1,2-Dichloropropane	10.0	9.92	99	81-115	
1,3-Dichloropropane	10.0	9.66	97	79-116	
2,2-Dichloropropane	10.0	9.46	95	50-129	
1,1-Dichloropropene	10.0	9.87	99	83-114	
Diisopropyl ether	10.0	9.95	99	77-118	
Ethylbenzene	10.0	9.66	97	83-112	
Hexachlorobutadiene	10.0	8.50	85	36-134	
2-Hexanone	20.0	17.1	85	55-133	
Isopropylbenzene	10.0	9.68	97	75-114	
Methylene Chloride	10.0	11.4	114	66-131	
4-Methyl-2-pentanone	20.0	16.1	80	63-128	
Methyl tert-butyl ether	10.0	10.3	103	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXR4363.D

Lab ID: LCS 240-85830/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	20.3	101	83-113	
Naphthalene	10.0	6.98	70	32-141	
n-Butylbenzene	10.0	9.75	97	66-125	
n-Propylbenzene	10.0	9.73	97	74-121	
o-Xylene	10.0	9.64	96	83-113	
p-Isopropyltoluene	10.0	9.91	99	74-120	
sec-Butylbenzene	10.0	9.60	96	70-117	
Styrene	10.0	9.81	98	79-114	
tert-Butyl alcohol	200	176	88	70-130	
tert-Butylbenzene	10.0	9.11	91	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.63	96	72-116	
1,1,2,2-Tetrachloroethane	10.0	8.60	86	68-118	
Tetrachloroethene	10.0	9.87	99	79-114	
Toluene	10.0	9.49	95	84-111	
trans-1,2-Dichloroethene	10.0	11.0	110	83-117	
trans-1,3-Dichloropropene	10.0	9.51	95	58-117	
1,2,3-Trichlorobenzene	10.0	6.23	62	54-126	
1,2,4-Trichlorobenzene	10.0	7.75	78	48-135	
1,1,1-Trichloroethane	10.0	10.3	103	74-118	
Trichloroethene	10.0	9.96	100	76-117	
Trichlorofluoromethane	10.0	14.5	145	49-157	
1,2,3-Trichloropropane	10.0	8.65	87	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	14.2	142	74-151	
1,2,3-Trimethylbenzene	10.0	9.83	98	70-130	
1,2,4-Trimethylbenzene	10.0	9.29	93	76-120	
Vinyl acetate	10.0	8.51	85	46-161	
Vinyl chloride	10.0	10.3	103	53-127	
Xylenes, Total	30.0	29.9	100	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7957.D

Lab ID: 240-24004-C-25 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20.0	5.0 U	19.1	95	33-145	
Benzene	10.0	1.0 U	9.60	96	72-121	
Bromobenzene	10.0	1.0 U	9.65	96	71-116	
Bromochloromethane	10.0	1.0 U	9.55	95	73-121	
Bromodichloromethane	10.0	1.0 U	10.5	105	67-120	
Bromoform	10.0	1.0 U	11.4	114	32-128	
Bromomethane	10.0	1.0 U	7.13	71	10-186	
2-Butanone	20.0	5.0 U	20.5	102	54-129	
Carbon disulfide	10.0	1.0 U	9.35	93	57-147	
Carbon tetrachloride	10.0	1.0 U	10.5	105	59-129	
Chlorobenzene	10.0	1.0 U	9.56	96	80-110	
Chloroethane	10.0	1.0 U	8.14	81	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0	10-150	F
Chloroform	10.0	1.0 U	9.45	95	76-118	
Chloromethane	10.0	1.0 U	7.66	77	33-132	
2-Chlorotoluene	10.0	1.0 U	9.66	97	69-117	
4-Chlorotoluene	10.0	1.0 U	9.86	99	71-116	
cis-1,2-Dichloroethene	10.0	1.0 U	9.32	93	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	9.16	92	51-110	
Dibromochloromethane	10.0	1.0 U	10.8	108	56-118	
1,2-Dibromo-3-Chloropropane	10.0	5.0 U	11.4	114	32-139	
1,2-Dibromoethane	10.0	1.0 U	10.5	105	74-113	
Dibromomethane	10.0	1.0 U	10.4	104	77-121	
1,2-Dichlorobenzene	10.0	1.0 U	9.50	95	75-111	
1,3-Dichlorobenzene	10.0	1.0 U	9.50	95	73-110	
1,4-Dichlorobenzene	10.0	1.0 U	9.21	92	75-110	
Dichlorodifluoromethane	10.0	1.0 U	6.96	70	17-128	
1,1-Dichloroethane	10.0	1.0 U	9.64	96	79-116	
1,2-Dichloroethane	10.0	1.0 U	10.3	103	68-129	
1,1-Dichloroethene	10.0	1.0 U	9.25	92	74-135	
1,2-Dichloropropane	10.0	1.0 U	9.73	97	78-115	
1,3-Dichloropropane	10.0	1.0 U	10.3	103	74-118	
2,2-Dichloropropane	10.0	1.0 U	8.16	82	38-127	
1,1-Dichloropropene	10.0	1.0 U	10.2	102	80-114	
Diisopropyl ether	10.0	5.0 U	11.4	114	73-118	
Ethylbenzene	10.0	1.0 U	10.0	100	75-116	
Hexachlorobutadiene	10.0	1.0 U	7.18	72	27-132	
2-Hexanone	20.0	5.0 U	22.3	112	47-139	
Isopropylbenzene	10.0	1.0 U	8.50	85	68-116	
Methylene Chloride	10.0	1.0 U	7.78	78	63-128	
4-Methyl-2-pentanone	20.0	5.0 U	20.4	102	56-131	
Methyl tert-butyl ether	10.0	1.0 U	9.24	92	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7957.D

Lab ID: 240-24004-C-25 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	2.0 U	20.2	101	75-117	
Naphthalene	10.0	1.0 U	9.53	95	15-158	
n-Butylbenzene	10.0	1.0 U	9.45	95	56-127	
n-Propylbenzene	10.0	1.0 U	8.93	89	64-124	
o-Xylene	10.0	1.0 U	9.80	98	76-116	
p-Isopropyltoluene	10.0	1.0 U	8.53	85	64-122	
sec-Butylbenzene	10.0	1.0 U	9.33	93	60-119	
Styrene	10.0	1.0 U	8.99	90	71-117	
tert-Butyl alcohol	200	20 U	210	105	70-130	
tert-Butylbenzene	10.0	1.0 U	8.35	84	61-119	
1,1,1,2-Tetrachloroethane	10.0	1.0 U	10.1	101	64-118	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	10.3	103	63-122	
Tetrachloroethene	10.0	1.0 U	9.88	99	70-117	
Toluene	10.0	1.0 U	9.75	98	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	8.98	90	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	10.5	105	46-116	
1,2,3-Trichlorobenzene	10.0	1.0 U	9.03	90	45-129	
1,2,4-Trichlorobenzene	10.0	1.0 U	8.17	82	38-138	
1,1,1-Trichloroethane	10.0	1.0 U	9.13	91	68-121	
Trichloroethene	10.0	1.0 U	9.71	97	66-120	
Trichlorofluoromethane	10.0	1.0 U	13.5	135	46-157	
1,2,3-Trichloropropane	10.0	1.0 U	10.4	104	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	13.0	130	70-152	
1,2,3-Trimethylbenzene	10.0	5.0 U	11.1	111	70-130	
1,2,4-Trimethylbenzene	10.0	1.0 U	8.68	87	67-124	
Vinyl acetate	10.0	2.0 U	10.2	102	43-157	
Vinyl chloride	10.0	1.0 U	8.38	84	49-130	
Xylenes, Total	30.0	2.0 U	30.0	100	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7958.D

Lab ID: 240-24004-G-25 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	20.0	17.5	87	9	30	33-145	
Benzene	10.0	8.87	89	8	30	72-121	
Bromobenzene	10.0	8.95	90	7	30	71-116	
Bromochloromethane	10.0	9.22	92	3	30	73-121	
Bromodichloromethane	10.0	9.58	96	9	30	67-120	
Bromoform	10.0	10.9	109	4	30	32-128	
Bromomethane	10.0	7.53	75	5	30	10-186	
2-Butanone	20.0	17.8	89	14	30	54-129	
Carbon disulfide	10.0	9.15	92	2	30	57-147	
Carbon tetrachloride	10.0	10.0	100	4	30	59-129	
Chlorobenzene	10.0	8.86	89	8	30	80-110	
Chloroethane	10.0	8.32	83	2	30	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
Chloroform	10.0	9.25	92	2	30	76-118	
Chloromethane	10.0	7.62	76	1	30	33-132	
2-Chlorotoluene	10.0	8.76	88	10	30	69-117	
4-Chlorotoluene	10.0	9.26	93	6	30	71-116	
cis-1,2-Dichloroethene	10.0	9.32	93	0	30	70-120	
cis-1,3-Dichloropropene	10.0	7.91	79	15	30	51-110	
Dibromochloromethane	10.0	9.74	97	11	30	56-118	
1,2-Dibromo-3-Chloropropane	10.0	10.2	102	11	30	32-139	
1,2-Dibromoethane	10.0	9.32	93	12	30	74-113	
Dibromomethane	10.0	9.56	96	9	30	77-121	
1,2-Dichlorobenzene	10.0	8.78	88	8	30	75-111	
1,3-Dichlorobenzene	10.0	8.88	89	7	30	73-110	
1,4-Dichlorobenzene	10.0	8.64	86	6	30	75-110	
Dichlorodifluoromethane	10.0	5.78	58	19	30	17-128	
1,1-Dichloroethane	10.0	9.34	93	3	30	79-116	
1,2-Dichloroethane	10.0	9.33	93	9	30	68-129	
1,1-Dichloroethene	10.0	8.77	88	5	30	74-135	
1,2-Dichloropropane	10.0	8.82	88	10	30	78-115	
1,3-Dichloropropane	10.0	8.97	90	14	30	74-118	
2,2-Dichloropropane	10.0	8.52	85	4	30	38-127	
1,1-Dichloropropene	10.0	9.27	93	9	30	80-114	
Diisopropyl ether	10.0	11.4	114	0	30	73-118	
Ethylbenzene	10.0	9.23	92	8	30	75-116	
Hexachlorobutadiene	10.0	7.30	73	2	30	27-132	
2-Hexanone	20.0	20.6	103	8	30	47-139	
Isopropylbenzene	10.0	8.21	82	3	30	68-116	
Methylene Chloride	10.0	7.63	76	2	30	63-128	
4-Methyl-2-pentanone	20.0	17.9	90	13	30	56-131	
Methyl tert-butyl ether	10.0	9.05	90	2	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM7958.D

Lab ID: 240-24004-G-25 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.0	95	6	30	75-117	
Naphthalene	10.0	9.17	92	4	30	15-158	
n-Butylbenzene	10.0	8.92	89	6	30	56-127	
n-Propylbenzene	10.0	8.21	82	8	30	64-124	
o-Xylene	10.0	9.50	95	3	30	76-116	
p-Isopropyltoluene	10.0	7.92	79	7	30	64-122	
sec-Butylbenzene	10.0	8.43	84	10	30	60-119	
Styrene	10.0	9.08	91	1	30	71-117	
tert-Butyl alcohol	200	208	104	1	30	70-130	
tert-Butylbenzene	10.0	7.43	74	12	30	61-119	
1,1,1,2-Tetrachloroethane	10.0	9.48	95	6	30	64-118	
1,1,2,2-Tetrachloroethane	10.0	8.82	88	15	30	63-122	
Tetrachloroethene	10.0	8.43	84	16	30	70-117	
Toluene	10.0	8.50	85	14	30	78-114	
trans-1,2-Dichloroethene	10.0	8.98	90	0	30	80-119	
trans-1,3-Dichloropropene	10.0	9.00	90	15	30	46-116	
1,2,3-Trichlorobenzene	10.0	8.74	87	3	30	45-129	
1,2,4-Trichlorobenzene	10.0	8.09	81	1	30	38-138	
1,1,1-Trichloroethane	10.0	9.00	90	1	30	68-121	
Trichloroethene	10.0	8.97	90	8	30	66-120	
Trichlorofluoromethane	10.0	12.3	123	10	30	46-157	
1,2,3-Trichloropropane	10.0	9.00	90	14	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	10.7	107	19	30	70-152	
1,2,3-Trimethylbenzene	10.0	10.3	103	7	30	70-130	
1,2,4-Trimethylbenzene	10.0	8.01	80	8	30	67-124	
Vinyl acetate	10.0	9.79	98	4	30	43-157	
Vinyl chloride	10.0	8.05	81	4	30	49-130	
Xylenes, Total	30.0	28.5	95	5	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: STD8260 240-85563/4 Date Analyzed: 05/11/2013 16:47

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM7904.D Heated Purge: (Y/N) N

Calibration ID: 15161

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2186100	5.70	1620515	8.39	991438	10.64
UPPER LIMIT		4372200	6.20	3241030	8.89	1982876	11.14
LOWER LIMIT		1093050	5.20	810258	7.89	495719	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-85563/8		2032613	5.70	1497472	8.39	911811	10.64
CCVIS 240-85619/2		2101223	5.70	1547407	8.39	952928	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: CCVIS 240-85619/2 Date Analyzed: 05/13/2013 09:54

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM7932.D Heated Purge: (Y/N) N

Calibration ID: 15161

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2101223	5.70	1547407	8.39	952928	10.64
UPPER LIMIT		4202446	6.20	3094814	8.89	1905856	11.14
LOWER LIMIT		1050612	5.20	773704	7.89	476464	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-85619/3		2354639	5.70	1639944	8.39	917686	10.64
LCS 240-85619/4		2325437	5.70	1608976	8.39	1031678	10.64
MB 240-85619/6		2087049	5.70	1533790	8.39	852147	10.64
240-23909-1	MRC-OF08A-050113	2064880	5.70	1500191	8.39	820645	10.64
240-23909-5	MRC-OF08D-050113	2038677	5.70	1479752	8.39	811385	10.64
240-23909-6	MRC-OF-06B-050113	2127874	5.70	1514821	8.39	810290	10.64
240-23909-7	MRC-OF-06C-050113	1841559	5.70	1353702	8.39	748935	10.64
240-23909-8	MRC-OF-06A-050113	2064552	5.70	1478715	8.39	804269	10.64
240-23909-9	MRC-OF-95D-050113	1794976	5.70	1327668	8.39	710725	10.64
240-24004-C-25 MS		2095554	5.70	1465382	8.39	905648	10.64
240-24004-G-25 MSD		2185801	5.70	1516068	8.39	1014166	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: STD8260 240-84979/4 Date Analyzed: 05/07/2013 12:44

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXR4177.D Heated Purge: (Y/N) N

Calibration ID: 15035

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1721868	5.76	1437567	8.47	792989	10.72
UPPER LIMIT		3443736	6.26	2875134	8.97	1585978	11.22
LOWER LIMIT		860934	5.26	718784	7.97	396495	10.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84979/14		1686247	5.76	1417612	8.47	781702	10.72
CCVIS 240-85830/2		1382642	5.76	1134082	8.48	621561	10.72

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: CCVIS 240-85830/2 Date Analyzed: 05/14/2013 12:55

Instrument ID: A3UX17 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXR4361.D Heated Purge: (Y/N) N

Calibration ID: 15038

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1382642	5.76	1134082	8.48	621561	10.72
UPPER LIMIT		2765284	6.26	2268164	8.98	1243122	11.22
LOWER LIMIT		691321	5.26	567041	7.98	310781	10.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-85830/3		1385930	5.76	1002359	8.48	583365	10.72
LCS 240-85830/4		1320262	5.76	1097353	8.48	640456	10.72
MB 240-85830/6		1194253	5.76	1089067	8.48	632184	10.72
240-23909-2	TB-050113	1202052	5.76	1014760	8.48	575668	10.72
240-23909-3	MRC-OF08B-050113	1432040	5.76	1191956	8.48	610116	10.72
240-23909-4	MRC-OF08C-050113	1139706	5.76	991564	8.48	519024	10.72

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: 30411001.D DFTPP Injection Date: 04/11/2013

Instrument ID: A4HP10 DFTPP Injection Time: 17:39

Analysis Batch No.: 81611

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	44.0	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	48.3	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.2	
441	Present, but less than mass 443	10.1	
442	40.0 - 110.0% of mass 198	49.1	
443	15.0 - 24.0% of mass 442	10.2	(20.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-81611/2	30411002.D	04/11/2013	18:04
	STD4 240-81611/3	30411003.D	04/11/2013	18:28
	STD3 240-81611/4	30411004.D	04/11/2013	18:53
	STD2 240-81611/5	30411005.D	04/11/2013	19:17
	STD1 240-81611/6	30411006.D	04/11/2013	19:41
	STD9 240-81611/7	30411007.D	04/11/2013	20:06
	STD8 240-81611/8	30411008.D	04/11/2013	20:30
	STD7 240-81611/9	30411009.D	04/11/2013	20:54
	STD6 240-81611/10	30411010.D	04/11/2013	21:19
	ICV 240-81611/11	30411011.D	04/11/2013	21:43

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 81611

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/11/2013 18:04 Calibration End Date: 04/11/2013 21:19 Calibration ID: 14467

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-81611/6	30411006.D
Level 2	STD2 240-81611/5	30411005.D
Level 3	STD3 240-81611/4	30411004.D
Level 4	STD4 240-81611/3	30411003.D
Level 5	STD5 240-81611/2	30411002.D
Level 6	STD6 240-81611/10	30411010.D
Level 7	STD7 240-81611/9	30411009.D
Level 8	STD8 240-81611/8	30411008.D
Level 9	STD9 240-81611/7	30411007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5077	0.8345 0.5355	0.6096 0.5712	0.5723 0.5485	0.5484	Ave		0.5910				17.0		20.0			
N-Nitrosodimethylamine	0.6705	0.6142 0.7240	0.5757 0.7721	0.5872 0.7488	0.6419	Ave		0.6668				11.0		20.0			
Pyridine	1.2317	1.1026 1.2779	1.1852 1.4178	1.1447 1.3639	1.1702	Ave		1.2367				8.9		20.0			
Benzaldehyde	1.1249 1.0449	1.0583 1.0812	1.0682 1.1599	1.0922 1.0807	1.0839	Ave		1.0882			0.0100	3.2		20.0			
Phenol	1.4667	1.5399 1.5218	1.4167 1.6495	1.4394 1.6083	1.4943	Ave		1.5171			0.8000	5.3		20.0			
Aniline	1.8148	1.7784 1.9149	1.7438 2.0710	1.7565 2.0147	1.8540	Ave		1.8685				6.5		20.0			
Bis(2-chloroethyl)ether	1.1033	1.2234 1.1759	1.1542 1.2689	1.1207 1.2266	1.1205	Ave		1.1742			0.7000	5.1		20.0			
2-Chlorophenol	1.1629	1.2275 1.2455	1.1526 1.3481	1.1518 1.2918	1.2072	Ave		1.2234			0.8000	5.8		20.0			
1,3-Dichlorobenzene	1.2781	1.2588 1.3219	1.2627 1.4607	1.2751 1.3977	1.3248	Ave		1.3225				5.5		20.0			
1,4-Dichlorobenzene	1.3065	1.3310 1.3551	1.3000 1.4638	1.2381 1.4277	1.3723	Ave		1.3493				5.4		20.0			
Benzyl alcohol	0.7618	0.7103 0.7799	0.7415 0.8771	0.7511 0.8324	0.7602	Ave		0.7768				6.9		20.0			
1,2-Dichlorobenzene	1.2420	1.2455 1.2772	1.3006 1.3837	1.2478 1.3461	1.2559	Ave		1.2873				4.1		20.0			
2-Methylphenol	1.0801	1.0155 1.1189	1.0441 1.2414	1.0430 1.1821	1.1117	Ave		1.1046			0.7000	6.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-81611/11 Calibration Date: 04/11/2013 21:43

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30411011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5593		9.46	10.0	-5.4	30.0
N-Nitrosodimethylamine	Ave	0.6668	0.7036		10.6	10.0	5.5	30.0
Pyridine	Ave	1.237	1.378		11.1	10.0	11.4	30.0
Benzaldehyde	Ave	1.088	1.151	0.0100	21.2	20.0	5.8	30.0
Phenol	Ave	1.517	1.647	0.8000	10.9	10.0	8.6	30.0
Aniline	Ave	1.869	2.013		10.8	10.0	7.7	30.0
Bis(2-chloroethyl)ether	Ave	1.174	1.246	0.7000	10.6	10.0	6.1	30.0
2-Chlorophenol	Ave	1.223	1.305	0.8000	10.7	10.0	6.7	30.0
1,3-Dichlorobenzene	Ave	1.322	1.426		10.8	10.0	7.8	30.0
1,4-Dichlorobenzene	Ave	1.349	1.476		10.9	10.0	9.4	30.0
Benzyl alcohol	Ave	0.7768	0.8665		11.2	10.0	11.6	30.0
1,2-Dichlorobenzene	Ave	1.287	1.390		10.8	10.0	8.0	30.0
2-Methylphenol	Ave	1.105	1.225	0.7000	11.1	10.0	10.9	30.0
bis (2-chloroisopropyl) ether	Ave	1.795	2.305		9.25	7.20	28.4	30.0
Indene	Ave	2.278	2.448		21.5	20.0	7.4	30.0
3 & 4 Methylphenol	Ave	1.151	1.289		11.2	10.0	12.0	30.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.8916	0.5000	10.8	10.0	8.2	30.0
Acetophenone	Ave	1.716	1.861	0.0100	10.8	10.0	8.5	30.0
Hexachloroethane	Ave	0.5215	0.5613	0.3000	10.8	10.0	7.6	30.0
Nitrobenzene	Ave	0.3401	0.3689	0.2000	10.8	10.0	8.5	30.0
Isophorone	Ave	0.6103	0.6861	0.4000	11.2	10.0	12.4	30.0
2-Nitrophenol	Ave	0.1624	0.1809	0.1000	11.1	10.0	11.4	30.0
2,4-Dimethylphenol	Ave	0.3114	0.3269	0.2000	10.5	10.0	5.0	30.0
Benzoic acid	Lin		0.2115		21.3	20.0	6.7	30.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3816	0.3000	10.6	10.0	6.2	30.0
2,4-Dichlorophenol	Ave	0.2560	0.2820	0.2000	11.0	10.0	10.1	30.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.3259		10.9	10.0	8.7	30.0
Naphthalene	Ave	0.9279	1.002	0.7000	10.8	10.0	7.9	30.0
4-Chloroaniline	Ave	0.3867	0.4119	0.0100	10.7	10.0	6.5	30.0
Hexachlorobutadiene	Ave	0.1834	0.1927	0.0100	10.5	10.0	5.1	30.0
Caprolactam	Ave	0.0877	0.0951	0.0100	21.7	20.0	8.4	30.0
4-Chloro-3-methylphenol	Ave	0.2736	0.3035	0.2000	11.1	10.0	11.0	30.0
2-Methylnaphthalene	Ave	0.6242	0.6650	0.4000	10.7	10.0	6.5	30.0
1-Methylnaphthalene	Ave	0.5854	0.6077		10.4	10.0	3.8	30.0
Hexachlorocyclopentadiene	Ave	0.3175	0.3659	0.0500	11.5	10.0	15.2	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.5788	0.0100	10.9	10.0	9.0	30.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3734	0.2000	11.3	10.0	13.2	30.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3828	0.2000	11.2	10.0	11.9	30.0
1,1'-Biphenyl	Ave	1.293	1.393	0.0100	10.8	10.0	7.7	30.0
2-Chloronaphthalene	Ave	0.9841	1.075	0.8000	10.9	10.0	9.3	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: 30509001.D DFTPP Injection Date: 05/09/2013

Instrument ID: A4HP10 DFTPP Injection Time: 09:32

Analysis Batch No.: 85293

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	40.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.9	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	50.2	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	21.8	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	11.2	
442	40.0 - 110.0% of mass 198	69.2	
443	15.0 - 24.0% of mass 442	13.5	(19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-85293/2	30509002.D	05/09/2013	09:55
	MB 240-84928/23-A	30509003.D	05/09/2013	10:19
	LCS 240-84928/24-A	30509004.D	05/09/2013	10:43
MRC-OF08A-050113	240-23909-1	30509006.D	05/09/2013	11:46
MRC-OF08B-050113	240-23909-3	30509007.D	05/09/2013	12:10
MRC-OF08C-050113	240-23909-4	30509008.D	05/09/2013	12:34
MRC-OF08D-050113	240-23909-5	30509009.D	05/09/2013	12:57
MRC-OF-06B-050113	240-23909-6	30509010.D	05/09/2013	13:21
MRC-OF-06C-050113	240-23909-7	30509011.D	05/09/2013	13:45

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCV 240-85293/2 Calibration Date: 05/09/2013 09:55

Instrument ID: A4HP10 Calib Start Date: 04/11/2013 18:04

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/11/2013 21:19

Lab File ID: 30509002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5910	0.5475		9.26	10.0	-7.4	20.0
N-Nitrosodimethylamine	Ave	0.6668	0.7186		10.8	10.0	7.8	20.0
Pyridine	Ave	1.237	1.223		9.89	10.0	-1.1	20.0
Benzaldehyde	Ave	1.088	0.9711	0.0100	17.8	20.0	-10.8	20.0
Phenol	Ave	1.517	1.623	0.8000	10.7	10.0	7.0	20.0
Aniline	Ave	1.869	1.922		10.3	10.0	2.8	20.0
Bis(2-chloroethyl)ether	Ave	1.174	1.231	0.7000	10.5	10.0	4.8	20.0
2-Chlorophenol	Ave	1.223	1.297	0.8000	10.6	10.0	6.0	20.0
1,3-Dichlorobenzene	Ave	1.322	1.422		10.8	10.0	7.5	20.0
1,4-Dichlorobenzene	Ave	1.349	1.437		10.7	10.0	6.5	20.0
Benzyl alcohol	Ave	0.7768	0.7496		9.65	10.0	-3.5	20.0
1,2-Dichlorobenzene	Ave	1.287	1.349		10.5	10.0	4.8	20.0
2-Methylphenol	Ave	1.105	1.147	0.7000	10.4	10.0	3.8	20.0
Indene	Ave	2.278	2.353		20.7	20.0	3.3	20.0
bis (2-chloroisopropyl) ether	Ave	1.795	1.560		8.69	10.0	-13.1	20.0
3 & 4 Methylphenol	Ave	1.151	1.199		10.4	10.0	4.2	20.0
N-Nitrosodi-n-propylamine	Ave	0.8241	0.7893	0.5000	9.58	10.0	-4.2	20.0
Acetophenone	Ave	1.716	1.709	0.0100	9.96	10.0	-0.4	20.0
Hexachloroethane	Ave	0.5215	0.5105	0.3000	9.79	10.0	-2.1	20.0
Nitrobenzene	Ave	0.3401	0.3319	0.2000	9.76	10.0	-2.4	20.0
Isophorone	Ave	0.6103	0.5736	0.4000	9.40	10.0	-6.0	20.0
2-Nitrophenol	Ave	0.1624	0.1638	0.1000	10.1	10.0	0.9	20.0
2,4-Dimethylphenol	Ave	0.3114	0.2874	0.2000	9.23	10.0	-7.7	20.0
Benzoic acid	Lin		0.0891		10.0	20.0	-50.0*	20.0
Bis(2-chloroethoxy)methane	Ave	0.3595	0.3653	0.3000	10.2	10.0	1.6	20.0
2,4-Dichlorophenol	Ave	0.2560	0.2686	0.2000	10.5	10.0	4.9	20.0
1,2,4-Trichlorobenzene	Ave	0.2998	0.2947		9.83	10.0	-1.7	20.0
Naphthalene	Ave	0.9279	0.9297	0.7000	10.0	10.0	0.2	20.0
4-Chloroaniline	Ave	0.3867	0.3951	0.0100	10.2	10.0	2.2	20.0
Hexachlorobutadiene	Ave	0.1834	0.1604	0.0100	8.75	10.0	-12.5	20.0
Caprolactam	Ave	0.0877	0.0931	0.0100	21.2	20.0	6.1	20.0
4-Chloro-3-methylphenol	Ave	0.2736	0.2509	0.2000	9.17	10.0	-8.3	20.0
2-Methylnaphthalene	Ave	0.6242	0.6117	0.4000	9.80	10.0	-2.0	20.0
1-Methylnaphthalene	Ave	0.5854	0.5635		9.63	10.0	-3.7	20.0
Hexachlorocyclopentadiene	Ave	0.3175	0.2370	0.0500	7.46	10.0	-25.4*	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.5309	0.4771	0.0100	8.99	10.0	-10.1	20.0
2,4,6-Trichlorophenol	Ave	0.3299	0.3113	0.2000	9.43	10.0	-5.7	20.0
2,4,5-Trichlorophenol	Ave	0.3422	0.3255	0.2000	9.51	10.0	-4.9	20.0
1,1'-Biphenyl	Ave	1.293	1.154	0.0100	8.93	10.0	-10.7	20.0
2-Chloronaphthalene	Ave	0.9841	0.9523	0.8000	9.68	10.0	-3.2	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: 30509003.D Lab Sample ID: MB 240-84928/23-A

Matrix: Water Date Extracted: 05/07/2013 08:16

Instrument ID: A4HP10 Date Analyzed: 05/09/2013 10:19

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-84928/24-A	30509004.D	05/09/2013 10:43
MRC-OF08A-050113	240-23909-1	30509006.D	05/09/2013 11:46
MRC-OF08B-050113	240-23909-3	30509007.D	05/09/2013 12:10
MRC-OF08C-050113	240-23909-4	30509008.D	05/09/2013 12:34
MRC-OF08D-050113	240-23909-5	30509009.D	05/09/2013 12:57
MRC-OF-06B-050113	240-23909-6	30509010.D	05/09/2013 13:21
MRC-OF-06C-050113	240-23909-7	30509011.D	05/09/2013 13:45

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-84928/23-A

Matrix: Water | Lab File ID: 30509003.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:16

Sample wt/vol: 1000(mL) | Date Analyzed: 05/09/2013 10:19

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85293 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	58		20-110
367-12-4	2-Fluorophenol (Surr)	70		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	69		21-110
1718-51-0	Terphenyl-d14 (Surr)	53		24-110

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: 30503001.D DFTPP Injection Date: 05/03/2013

Instrument ID: A4HP9 DFTPP Injection Time: 09:46

Analysis Batch No.: 84597

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	45.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	64.6	
70	Less than 2.0% of mass 69	0.2	(0.3)1
127	25.0 - 75.0% of mass 198	52.5	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	21.8	
365	Greater than 0.75% of mass 198	3.1	
441	Present, but less than mass 443	11.7	
442	40.0 - 110.0% of mass 198	67.2	
443	15.0 - 24.0% of mass 442	12.8	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-84597/2	30503002.D	05/03/2013	10:37
	STD4 240-84597/3	30503003.D	05/03/2013	11:10
	STD3 240-84597/4	30503004.D	05/03/2013	11:36
	STD2 240-84597/5	30503005.D	05/03/2013	12:02
	STD1 240-84597/6	30503006.D	05/03/2013	12:28
	STD9 240-84597/7	30503007.D	05/03/2013	12:54
	STD8 240-84597/8	30503008.D	05/03/2013	13:20
	STD7 240-84597/9	30503009.D	05/03/2013	13:46
	STD6 240-84597/10	30503010.D	05/03/2013	14:12
	ICV 240-84597/11	30503011.D	05/03/2013	14:38

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-23909-1 Analy Batch No.: 84597

SDG No.:

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/03/2013 10:37 Calibration End Date: 05/03/2013 14:12 Calibration ID: 14970

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84597/6	30503006.D
Level 2	STD2 240-84597/5	30503005.D
Level 3	STD3 240-84597/4	30503004.D
Level 4	STD4 240-84597/3	30503003.D
Level 5	STD5 240-84597/2	30503002.D
Level 6	STD6 240-84597/10	30503010.D
Level 7	STD7 240-84597/9	30503009.D
Level 8	STD8 240-84597/8	30503008.D
Level 9	STD9 240-84597/7	30503007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.8449	0.8924 0.8329	0.8212 0.9000	0.7953 0.8551	0.8024	Ave		0.8430				4.6		20.0			
N-Nitrosodimethylamine	1.4310	1.2562 1.4151	1.3863 1.5410	1.3476 1.4643	1.3923	Ave		1.4042				5.9		20.0			
Pyridine	2.2951	2.0896 2.3261	2.2419 2.5282	2.2239 2.3981	2.2735	Ave		2.2970				5.6		20.0			
Phenol	2.3513	2.5192 2.2608	2.5094 2.4505	2.4436 2.2873	2.3678	Ave		2.3987			0.8000	4.1		20.0			
Benzaldehyde	2.1851 1.8256	1.9705 1.7516	1.9652 1.8349	1.9457 1.6346	1.8371	Ave		1.8834			0.0100	8.3		20.0			
Aniline	3.1630	3.1838 2.9711	3.3150 3.3145	3.0571 3.2869	3.1021	Ave		3.1742				4.0		20.0			
Bis(2-chloroethyl)ether	2.1938	2.1961 2.3989	2.1591 2.5066	2.3275 2.1964	2.1396	Ave		2.2647			0.7000	5.8		20.0			
2-Chlorophenol	1.3158	1.3841 1.2976	1.3855 1.4252	1.3758 1.3405	1.3207	Ave		1.3557			0.8000	3.2		20.0			
1,3-Dichlorobenzene	1.3737	1.4261 1.3464	1.4093 1.4756	1.4199 1.3904	1.3680	Ave		1.4012				2.9		20.0			
1,4-Dichlorobenzene	1.3691	1.4508 1.3653	1.4701 1.4781	1.4243 1.3943	1.3683	Ave		1.4150				3.3		20.0			
Benzyl alcohol	1.1056	1.0448 1.1077	1.1119 1.1849	1.1509 1.1114	1.1219	Ave		1.1174				3.6		20.0			
2-Methylphenol	1.4796	1.4574 1.4525	1.5572 1.5729	1.5570 1.4815	1.4870	Ave		1.5056			0.7000	3.2		20.0			
1,2-Dichlorobenzene	1.3071	1.3816 1.2449	1.3365 1.3457	1.3553 1.2703	1.2957	Ave		1.3171				3.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICV 240-84597/11 Calibration Date: 05/03/2013 14:38

Instrument ID: A4HP9 Calib Start Date: 05/03/2013 10:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/03/2013 14:12

Lab File ID: 30503011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.8430	0.8714		10.3	10.0	3.4	30.0
N-Nitrosodimethylamine	Ave	1.404	1.459		10.4	10.0	3.9	30.0
Pyridine	Ave	2.297	2.583		11.2	10.0	12.5	30.0
Phenol	Ave	2.399	2.564	0.8000	10.7	10.0	6.9	30.0
Benzaldehyde	Ave	1.883	1.952	0.0100	20.7	20.0	3.6	30.0
Aniline	Ave	3.174	3.283		10.3	10.0	3.4	30.0
Bis(2-chloroethyl)ether	Ave	2.265	2.466	0.7000	10.9	10.0	8.9	30.0
2-Chlorophenol	Ave	1.356	1.428	0.8000	10.5	10.0	5.4	30.0
1,3-Dichlorobenzene	Ave	1.401	1.456		10.4	10.0	3.9	30.0
1,4-Dichlorobenzene	Ave	1.415	1.491		10.5	10.0	5.4	30.0
Benzyl alcohol	Ave	1.117	1.199		10.7	10.0	7.3	30.0
2-Methylphenol	Ave	1.506	1.646	0.7000	10.9	10.0	9.3	30.0
1,2-Dichlorobenzene	Ave	1.317	1.375		10.4	10.0	4.4	30.0
bis (2-chloroisopropyl) ether	Ave	2.051	2.281		8.01	7.20	11.2	30.0
Indene	Ave	2.795	2.955		21.1	20.0	5.7	30.0
3 & 4 Methylphenol	Ave	1.621	1.765		10.9	10.0	8.9	30.0
N-Nitrosodi-n-propylamine	Ave	1.699	1.822	0.5000	10.7	10.0	7.2	30.0
Acetophenone	Ave	2.500	2.674	0.0100	10.7	10.0	6.9	30.0
Hexachloroethane	Ave	0.6951	0.7404	0.3000	10.7	10.0	6.5	30.0
Nitrobenzene	Ave	0.5742	0.6213	0.2000	10.8	10.0	8.2	30.0
Isophorone	Ave	0.9573	1.064	0.4000	11.1	10.0	11.2	30.0
2,4-Dimethylphenol	Ave	0.3940	0.4113	0.2000	10.4	10.0	4.4	30.0
2-Nitrophenol	Ave	0.1690	0.1820	0.1000	10.8	10.0	7.6	30.0
Benzoic acid	Ave	0.1992	0.2239		22.5	20.0	12.4	30.0
Bis(2-chloroethoxy)methane	Ave	0.5460	0.5704	0.3000	10.4	10.0	4.5	30.0
2,4-Dichlorophenol	Ave	0.2480	0.2632	0.2000	10.6	10.0	6.1	30.0
1,2,4-Trichlorobenzene	Ave	0.2716	0.2837		10.4	10.0	4.5	30.0
Naphthalene	Ave	0.9943	1.006	0.7000	10.1	10.0	1.2	30.0
4-Chloroaniline	Ave	0.5233	0.5403	0.0100	10.3	10.0	3.2	30.0
Hexachlorobutadiene	Ave	0.1586	0.1644	0.0100	10.4	10.0	3.7	30.0
Caprolactam	Ave	0.1118	0.1150	0.0100	20.6	20.0	2.9	30.0
4-Chloro-3-methylphenol	Ave	0.3504	0.3722	0.2000	10.6	10.0	6.2	30.0
2-Methylnaphthalene	Ave	0.6199	0.6281	0.4000	10.1	10.0	1.3	30.0
1-Methylnaphthalene	Ave	0.5708	0.5898		10.3	10.0	3.3	30.0
Hexachlorocyclopentadiene	Ave	0.3296	0.3839	0.0500	11.6	10.0	16.5	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4423	0.4954	0.0100	11.2	10.0	12.0	30.0
2,4,6-Trichlorophenol	Ave	0.2974	0.3389	0.2000	11.4	10.0	13.9	30.0
2,4,5-Trichlorophenol	Ave	0.3081	0.3365	0.2000	10.9	10.0	9.2	30.0
1,1'-Biphenyl	Ave	1.343	1.467	0.0100	10.9	10.0	9.2	30.0
2-Chloronaphthalene	Ave	1.005	1.080	0.8000	10.8	10.0	7.5	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: 9BO3.D DFTPP Injection Date: 05/09/2013

Instrument ID: A4HP9 DFTPP Injection Time: 10:00

Analysis Batch No.: 85244

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	48.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	68.4	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	52.0	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	22.7	
365	Greater than 0.75% of mass 198	3.1	
441	Present, but less than mass 443	12.0	
442	40.0 - 110.0% of mass 198	70.7	
443	15.0 - 24.0% of mass 442	13.3	(18.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-85244/2	30509002.D	05/09/2013	10:33
	MB 240-84944/13-A	30509006.D	05/09/2013	12:00
	LCS 240-84944/14-A	30509007.D	05/09/2013	12:25
MRC-OF-06A-050113	240-23909-8	30509016.D	05/09/2013	16:19
MRC-OF-95D-050113	240-23909-9	30509017.D	05/09/2013	16:45

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab Sample ID: CCV 240-85244/2 Calibration Date: 05/09/2013 10:33

Instrument ID: A4HP9 Calib Start Date: 05/03/2013 10:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/03/2013 14:12

Lab File ID: 30509002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.8430	0.8444		10.0	10.0	0.2	20.0
N-Nitrosodimethylamine	Ave	1.404	1.475		10.5	10.0	5.0	20.0
Pyridine	Ave	2.297	2.340		10.2	10.0	1.9	20.0
Benzaldehyde	Ave	1.883	1.824	0.0100	19.4	20.0	-3.2	20.0
Phenol	Ave	2.399	2.372	0.8000	9.89	10.0	-1.1	20.0
Aniline	Ave	3.174	3.069		9.67	10.0	-3.3	20.0
Bis(2-chloroethyl)ether	Ave	2.265	2.338	0.7000	10.3	10.0	3.2	20.0
2-Chlorophenol	Ave	1.356	1.299	0.8000	9.58	10.0	-4.2	20.0
1,3-Dichlorobenzene	Ave	1.401	1.363		9.72	10.0	-2.8	20.0
1,4-Dichlorobenzene	Ave	1.415	1.379		9.75	10.0	-2.5	20.0
Benzyl alcohol	Ave	1.117	1.109		9.93	10.0	-0.7	20.0
1,2-Dichlorobenzene	Ave	1.317	1.312		9.96	10.0	-0.4	20.0
2-Methylphenol	Ave	1.506	1.518	0.7000	10.1	10.0	0.8	20.0
bis (2-chloroisopropyl) ether	Ave	2.051	2.065		10.1	10.0	0.7	20.0
Indene	Ave	2.795	2.713		19.4	20.0	-2.9	20.0
3 & 4 Methylphenol	Ave	1.621	1.589		9.81	10.0	-1.9	20.0
N-Nitrosodi-n-propylamine	Ave	1.699	1.717	0.5000	10.1	10.0	1.1	20.0
Acetophenone	Ave	2.500	2.466	0.0100	9.86	10.0	-1.4	20.0
Hexachloroethane	Ave	0.6951	0.6877	0.3000	9.89	10.0	-1.1	20.0
Nitrobenzene	Ave	0.5742	0.5927	0.2000	10.3	10.0	3.2	20.0
Isophorone	Ave	0.9573	0.9851	0.4000	10.3	10.0	2.9	20.0
2,4-Dimethylphenol	Ave	0.3940	0.3807	0.2000	9.66	10.0	-3.4	20.0
2-Nitrophenol	Ave	0.1690	0.1619	0.1000	9.58	10.0	-4.2	20.0
Benzoic acid	Ave	0.1992	0.1394		14.0	20.0	-30.0*	20.0
Bis(2-chloroethoxy)methane	Ave	0.5460	0.5549	0.3000	10.2	10.0	1.6	20.0
2,4-Dichlorophenol	Ave	0.2480	0.2436	0.2000	9.82	10.0	-1.8	20.0
1,2,4-Trichlorobenzene	Ave	0.2716	0.2646		9.75	10.0	-2.5	20.0
Naphthalene	Ave	0.9943	0.9422	0.7000	9.48	10.0	-5.2	20.0
4-Chloroaniline	Ave	0.5233	0.4475	0.0100	8.55	10.0	-14.5	20.0
Hexachlorobutadiene	Ave	0.1586	0.1523	0.0100	9.61	10.0	-3.9	20.0
Caprolactam	Ave	0.1118	0.1116	0.0100	20.0	20.0	-0.1	20.0
4-Chloro-3-methylphenol	Ave	0.3504	0.3475	0.2000	9.92	10.0	-0.8	20.0
2-Methylnaphthalene	Ave	0.6199	0.5890	0.4000	9.50	10.0	-5.0	20.0
1-Methylnaphthalene	Ave	0.5708	0.5389		9.44	10.0	-5.6	20.0
Hexachlorocyclopentadiene	Ave	0.3296	0.1867	0.0500	5.67	10.0	-43.3*	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4423	0.4560	0.0100	10.3	10.0	3.1	20.0
2,4,6-Trichlorophenol	Ave	0.2974	0.2848	0.2000	9.58	10.0	-4.2	20.0
2,4,5-Trichlorophenol	Ave	0.3081	0.2888	0.2000	9.37	10.0	-6.3	20.0
1,1'-Biphenyl	Ave	1.343	1.301	0.0100	9.69	10.0	-3.1	20.0
2-Chloronaphthalene	Ave	1.005	0.9789	0.8000	9.74	10.0	-2.6	20.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Lab File ID: 30509006.D Lab Sample ID: MB 240-84944/13-A

Matrix: Water Date Extracted: 05/07/2013 08:45

Instrument ID: A4HP9 Date Analyzed: 05/09/2013 12:00

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-84944/14-A	30509007.D	05/09/2013 12:25
MRC-OF-06A-050113	240-23909-8	30509016.D	05/09/2013 16:19
MRC-OF-95D-050113	240-23909-9	30509017.D	05/09/2013 16:45

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-23909-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-84944/13-A

Matrix: Water | Lab File ID: 30509006.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/07/2013 08:45

Sample wt/vol: 1000(mL) | Date Analyzed: 05/09/2013 12:00

Con. Extract Vol.: 2.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 85244 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	66		20-110
367-12-4	2-Fluorophenol (Surr)	65		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	70		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	61		21-110
4165-62-2	Phenol-d5 (Surr)	69		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-OF08A-050113	240-23909-1	59	58	51	53	59	44
MRC-OF08B-050113	240-23909-3	57	56	49	46	58	47
MRC-OF08C-050113	240-23909-4	64	60	53	51	64	56
MRC-OF08D-050113	240-23909-5	57	57	50	48	56	48
MRC-OF-06B-050113	240-23909-6	73	71	65	59	73	50
MRC-OF-06C-050113	240-23909-7	74	76	67	64	72	54
MRC-OF-06A-050113	240-23909-8	60	65	57	60	79	55
MRC-OF-95D-050113	240-23909-9	60	64	58	61	62	50
	MB 240-84928/23-A	70	69	61	58	69	53
	MB 240-84944/13-A	65	69	61	66	70	57
	LCS 240-84928/24-A	87	84	79	76	82	58
	LCS 240-84944/14-A	68	71	67	67	77	54

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30509004.D

Lab ID: LCS 240-84928/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.6	63	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30509007.D

Lab ID: LCS 240-84944/14-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	11.9	59	27-110	.

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		186412	5.95	710480	7.06	434356	8.57
UPPER LIMIT		372824	6.45	1420960	7.56	868712	9.07
LOWER LIMIT		93206	5.45	355240	6.56	217178	8.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		174408	5.95	682302	7.06	409364	8.57
CCV 240-85293/2 CCVIS		162950	5.86	645314	6.98	395617	8.48

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: STD6 240-81611/10 Date Analyzed: 04/11/2013 21:19

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30411010.D Heated Purge: (Y/N) N

Calibration ID: 14467

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		809912	9.84	883495	12.45	695044	14.57
UPPER LIMIT		1619824	10.34	1766990	12.95	1390088	15.07
LOWER LIMIT		404956	9.34	441748	11.95	347522	14.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-81611/11		751682	9.84	793717	12.45	637005	14.57
CCV 240-85293/2 CCVIS		649077	9.75	720817	12.30	550273	14.38

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: CCV 240-85293/2 Date Analyzed: 05/09/2013 09:55

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30509002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		162950	5.86	645314	6.98	395617	8.48
UPPER LIMIT		325900	6.36	1290628	7.48	791234	8.98
LOWER LIMIT		81475	5.36	322657	6.48	197809	7.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84928/23-A		138927	5.86	541520	6.98	322530	8.48
LCS 240-84928/24-A		147795	5.86	565226	6.98	352019	8.48
240-23909-1	MRC-OF08A-050113	168724	5.86	653783	6.98	366222	8.48
240-23909-3	MRC-OF08B-050113	156304	5.86	606950	6.98	371626	8.48
240-23909-4	MRC-OF08C-050113	157402	5.86	609305	6.98	357888	8.48
240-23909-5	MRC-OF08D-050113	162479	5.86	605868	6.98	365143	8.48
240-23909-6	MRC-OF-06B-050113	160149	5.86	604411	6.98	356239	8.48
240-23909-7	MRC-OF-06C-050113	156673	5.86	602111	6.98	357667	8.48

DCB = 1,4-Dichlorobenzene-d4

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

NPT = Naphthalene-d8
Area Limit = 50%-200% of internal standard area

ANT = Acenaphthene-d10
RT Limit = ± 0.5 minutes of internal standard RT

ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: CCV 240-85293/2 Date Analyzed: 05/09/2013 09:55

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 30509002.D Heated Purge: (Y/N) N

Calibration ID: 14471

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		649077	9.75	720817	12.30	550273	14.38
UPPER LIMIT		1298154	10.25	1441634	12.80	1100546	14.88
LOWER LIMIT		324539	9.25	360409	11.80	275137	13.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84928/23-A		516005	9.75	558052	12.30	466264	14.38
LCS 240-84928/24-A		571947	9.75	642300	12.30	498123	14.38
240-23909-1	MRC-OF08A-050113	570137	9.75	615190	12.30	538416	14.38
240-23909-3	MRC-OF08B-050113	604414	9.75	592000	12.30	496736	14.38
240-23909-4	MRC-OF08C-050113	599540	9.75	573421	12.30	488058	14.38
240-23909-5	MRC-OF08D-050113	572444	9.75	631692	12.30	508236	14.38
240-23909-6	MRC-OF-06B-050113	583403	9.75	633929	12.30	521365	14.38
240-23909-7	MRC-OF-06C-050113	593228	9.75	631634	12.30	515121	14.38

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area

PRY = Perylene-d12

RT Limit = ± 0.5 minutes of internal standard RT

PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: STD6 240-84597/10 Date Analyzed: 05/03/2013 14:12

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30503010.D Heated Purge: (Y/N) N

Calibration ID: 14970

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		154552	5.78	659453	6.85	375331	8.35
UPPER LIMIT		309104	6.28	1318906	7.35	750662	8.85
LOWER LIMIT		77276	5.28	329727	6.35	187666	7.85
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84597/11		146037	5.78	627300	6.85	340384	8.35
CCV 240-85244/2 CCVIS		175757	5.62	741199	6.69	401711	8.18

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: STD6 240-84597/10 Date Analyzed: 05/03/2013 14:12

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30503010.D Heated Purge: (Y/N) N

Calibration ID: 14970

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		520566	9.62	709111	12.02	544978	14.15
UPPER LIMIT		1041132	10.12	1418222	12.52	1089956	14.65
LOWER LIMIT		260283	9.12	354556	11.52	272489	13.65
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84597/11		469485	9.62	621468	12.02	488350	14.15
CCV 240-85244/2 CCVIS		672651	9.45	776674	11.78	619569	13.74

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: CCV 240-85244/2 Date Analyzed: 05/09/2013 10:33

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30509002.D Heated Purge: (Y/N) N

Calibration ID: 14973

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		175757	5.62	741199	6.69	401711	8.18
UPPER LIMIT		351514	6.12	1482398	7.19	803422	8.68
LOWER LIMIT		87879	5.12	370600	6.19	200856	7.68
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84944/13-A		140257	5.62	585729	6.69	315821	8.18
LCS 240-84944/14-A		135894	5.62	595575	6.69	322737	8.18
240-23909-8	MRC-OF-06A-050113	146365	5.62	609253	6.69	337001	8.18
240-23909-9	MRC-OF-95D-050113	146692	5.62	610924	6.69	332651	8.18

DCB = 1,4-Dichlorobenzene-d4

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

NPT = Naphthalene-d8

Area Limit = 50%-200% of internal standard area

ANT = Acenaphthene-d10

RT Limit = ± 0.5 minutes of internal standard RT

ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-23909-1

SDG No.:

Sample No.: CCV 240-85244/2 Date Analyzed: 05/09/2013 10:33

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30509002.D Heated Purge: (Y/N) N

Calibration ID: 14973

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		672651	9.45	776674	11.78	619569	13.74
UPPER LIMIT		1345302	9.95	1553348	12.28	1239138	14.24
LOWER LIMIT		336326	8.95	388337	11.28	309785	13.24
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-84944/13-A		534319	9.45	604871	11.77	485490	13.73
LCS 240-84944/14-A		536585	9.45	617579	11.77	493972	13.73
240-23909-8	MRC-OF-06A-050113	546053	9.45	631231	11.77	503529	13.73
240-23909-9	MRC-OF-95D-050113	549788	9.45	607981	11.77	480454	13.74

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area

PRY = Perylene-d12

RT Limit = ± 0.5 minutes of internal standard RT

PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 05/09/2013 18:46 End Date: 05/09/2013 22:40

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn								
STD0 440-103576/1 IC	1		18:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD1 440-103576/2 IC	1		18:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD2 440-103576/3 IC	1		18:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD3 440-103576/4 IC	1		18:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
STD4 440-103576/5 IC	1		18:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICV 440-103576/6	1		18:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICB 440-103576/7	1		19:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			19:02																								
CRI 440-103576/9	1		19:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CRI 440-103576/10	1		19:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSA 440-103576/11	1		19:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ICSAB 440-103576/12	1		19:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
RINSE 440-103576/13			19:14																								
CCV 440-103576/14	1		21:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-103576/15	1		21:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
MB 440-103356/1-A	1	R	22:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
LCS 440-103356/2-A	1	R	22:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			22:05																								
240-23710-A-3-G DU	1	R	22:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23710-A-3-H MS	1	R	22:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23710-A-3-E MSD	1	R	22:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23710-A-3-B PDS	1	R	22:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
240-23909-9	1	R	22:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			22:18																								
CCV 440-103576/25	1		22:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-103576/26	1		22:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			22:25																								
ZZZZZZ			22:27																								
ZZZZZZ			22:29																								
ZZZZZZ			22:31																								
ZZZZZZ			22:34																								
240-23950-J-2-A SD ^10	10	R	22:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCV 440-103576/33	1		22:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 440-103576/34	1		22:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								

Prep Types:
R = Total Recoverable

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Instrument ID: CV-HG2 Analysis Method: 7470A

Start Date: 05/16/2013 18:24 End Date: 05/16/2013 19:37

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-105018/6-A	1		18:24	X
IC 440-105018/7-A	1		18:26	X
IC 440-105018/8-A	1		18:29	X
IC 440-105018/9-A	1		18:31	X
IC 440-105018/10-A	1		18:34	X
IC 440-105018/11-A	1		18:36	X
ICV 440-105018/1-A	1		18:39	X
ICB 440-105018/2-A	1		18:41	X
CRA 440-105018/5-A	1		18:44	X
MB 440-105035/1-A	1	T	18:46	X
LCS 440-105035/2-A	1	T	18:48	X
ZZZZZZ			18:51	
440-46166-G-3-B MS	1	T	18:53	X
440-46166-G-3-C MSD	1	T	18:56	X
ZZZZZZ			18:58	
ZZZZZZ			19:00	
ZZZZZZ			19:03	
ZZZZZZ			19:05	
CCV 440-105018/3-A	1		19:08	X
CCB 440-105018/4-A	1		19:10	X
ZZZZZZ			19:13	
ZZZZZZ			19:15	
ZZZZZZ			19:18	
ZZZZZZ			19:20	
ZZZZZZ			19:23	
ZZZZZZ			19:25	
ZZZZZZ			19:28	
240-23909-9	1	T	19:30	X
CCV 440-105018/3-A	1		19:32	X
CCB 440-105018/4-A	1		19:35	X
CRA 440-105018/5-A	1		19:37	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	ICV 440-103576/6 05/09/2013 18:57				CCV 440-103576/14 05/09/2013 21:55				CCV 440-103576/25 05/09/2013 22:20			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.7		25.0	91	50.1		50.0	100	49.6		50.0	99
Arsenic	25.9		25.0	104	50.9		50.0	102	49.8		50.0	100
Barium	25.9		25.0	103	50.6		50.0	101	49.9		50.0	100
Beryllium	25.3		25.0	101	52.4		50.0	105	51.6		50.0	103
Cadmium	25.2		25.0	101	50.3		50.0	101	49.7		50.0	99
Chromium	25.9		25.0	104	49.4		50.0	99	50.0		50.0	100
Cobalt	25.8		25.0	103	50.1		50.0	100	50.0		50.0	100
Copper	26.0		25.0	104	49.1		50.0	98	48.8		50.0	98
Lead	26.1		25.0	104	48.6		50.0	97	48.6		50.0	97
Molybdenum	26.2		25.0	105	51.0		50.0	102	50.6		50.0	101
Nickel	26.1		25.0	104	49.3		50.0	99	48.9		50.0	98
Selenium	25.1		25.0	100	50.3		50.0	101	50.2		50.0	100
Silver	25.0		25.0	100	50.2		50.0	100	49.8		50.0	100
Thallium	25.5		25.0	102	48.8		50.0	98	49.4		50.0	99
Vanadium	26.8		25.0	107	51.6		50.0	103	50.5		50.0	101
Zinc	26.5		25.0	106	46.4		50.0	93	46.2		50.0	92

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	CCV 440-103576/33 05/09/2013 22:38											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	49.8		50.0	100								
Arsenic	50.8		50.0	102								
Barium	50.1		50.0	100								
Beryllium	50.3		50.0	101								
Cadmium	49.5		50.0	99								
Chromium	49.7		50.0	99								
Cobalt	50.5		50.0	101								
Copper	48.9		50.0	98								
Lead	48.9		50.0	98								
Molybdenum	50.1		50.0	100								
Nickel	48.8		50.0	98								
Selenium	50.6		50.0	101								
Silver	49.6		50.0	99								
Thallium	49.8		50.0	100								
Vanadium	50.9		50.0	102								
Zinc	46.3		50.0	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

ICV Source: ME 1PPM HG2_00079 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00081

Analyte	ICV 440-105018/1-A 05/16/2013 18:39				CCV 440-105018/3-A 05/16/2013 19:08				CCV 440-105018/3-A 05/16/2013 19:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.23		8.00	103	4.31		4.00	108	4.42		4.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103576/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.06		103	50-150
Arsenic	2.00	1.65		82	50-150
Beryllium	1.00	1.06		106	50-150
Cadmium	1.00	1.07		107	50-150
Barium	2.00	2.25		112	50-150
Chromium	2.00	2.29		114	50-150
Copper	2.00	2.21		110	50-150
Nickel	2.00	2.46		123	50-150
Lead	2.00	2.14		107	50-150
Selenium	2.00	1.95	J	98	50-150
Cobalt	1.00	1.08		108	50-150
Silver	2.00	2.11		105	50-150
Thallium	2.00	2.05		103	50-150
Zinc	10.0	11.4	J	114	50-150
Molybdenum	2.00	2.15		108	50-150
Vanadium	4.00	4.35		109	50-150

Lab Sample ID: CRI 440-103576/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.06	J	106	50-150
Arsenic	1.00	0.970	J	97	50-150
Beryllium	0.500	0.537		107	50-150
Cadmium	0.500	0.531	J	106	50-150
Barium	1.00	1.07		107	50-150
Chromium	1.00	1.06	J	106	50-150
Copper	1.00	1.16	J	116	50-150
Nickel	1.00	1.26	J	126	50-150
Lead	1.00	1.07		107	50-150
Selenium	1.00	1.02	J	102	50-150
Cobalt	0.500	0.535	J	107	50-150
Silver	1.00	1.45		145	50-150
Thallium	1.00	1.03		103	50-150
Zinc	5.00	5.49	J	110	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103576/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	1.00	1.08	J	108	50-150
Vanadium	2.00	2.31		115	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Method: 7470A Instrument ID: CV-HG2

Lab Sample ID: CRA 440-105018/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00081

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.240		120	50-150

Lab Sample ID: CRA 440-105018/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00081

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.235		117	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Concentration Units: ug/L

22 16

Analyte	RL	ICB 440-103576/7 05/09/2013 19:00		CCB 440-103576/15 05/09/2013 21:58		CCB 440-103576/26 05/09/2013 22:23		CCB 440-103576/34 05/09/2013 22:40	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.332	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	0.117	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Nickel	2.0	2.0	U	0.601	J	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	0.107	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-105018/2-A 05/16/2013 18:41		CCB 440-105018/4-A 05/16/2013 19:10		CCB 440-105018/4-A 05/16/2013 19:35			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-103356/1-A

Instrument Code: ICPMS5 Batch No.: 103576

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	0.573	J		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-105035/1-A

Instrument Code: CV-HG2 Batch No.: 105230

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICSA 440-103576/11 Instrument ID: ICPMS5

Lab File ID: 012ICSA.d ICS Source: MEICPMS4 ICSA_00211

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.329**	
Arsenic		**-0.0410**	
Barium		**0.276**	
Beryllium		**0.0180**	
Cadmium		**1.52**	
Chromium		**0.955**	
Cobalt		**0.155**	
Copper		**1.56**	
Lead		**0.121**	
Molybdenum	**2000**	**2052**	**103**
Nickel		**2.14**	
Selenium		**-0.183**	
Silver		**0.0910**	
Thallium		**0.0160**	
Vanadium		**0.431**	
Zinc		**-0.945**	
Aluminum	*100000*	*88573*	*89*
Calcium	*100000*	*92794*	*93*
Cerium		*0.0450*	
Iron	*100000*	*90859*	*91*
Magnesium	*100000*	*91805*	*92*
Manganese		*0.153*	
Potassium	*100000*	*93281*	*93*
Sodium	*100000*	*92204*	*92*
Sr		*4.82*	
Tin		*0.149*	
Uranium		*0.0140*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Lab Sample ID: ICSAB 440-103576/12 Instrument ID: ICPMS5

Lab File ID: 013ICSB.d ICS Source: MEICPMS4 ICSB_00210

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**20.0**	**20.9**	**105**
Arsenic	**20.0**	**19.2**	**96**
Barium	**20.0**	**21.3**	**106**
Beryllium	**20.0**	**20.5**	**103**
Cadmium	**20.0**	**20.7**	**103**
Chromium	**20.0**	**20.0**	**100**
Cobalt	**20.0**	**19.3**	**97**
Copper	**20.0**	**19.7**	**99**
Lead	**20.0**	**19.5**	**97**
Molybdenum	**2020**	**2043**	**101**
Nickel	**20.0**	**20.4**	**102**
Selenium	**20.0**	**18.0**	**90**
Silver	**20.0**	**19.3**	**96**
Thallium	**20.0**	**18.7**	**93**
Vanadium	**20.0**	**20.2**	**101**
Zinc	**20.0**	**16.0**	**80**
Aluminum	*100000*	*87671*	*88*
Calcium	*101000*	*93042*	*92*
Cerium	*20.0*	*21.1*	*105*
Iron	*100000*	*90048*	*90*
Magnesium	*101000*	*92041*	*92*
Manganese	*20.0*	*19.4*	*97*
Potassium	*101000*	*93432*	*93*
Sodium	*101000*	*91837*	*91*
Sr	*20.0*	*26.0*	*130*
Tin	*20.0*	*20.8*	*104*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-H MS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.7		2.0	U	80.0	100	75-125		6020
Arsenic	79.3		5.0	U	80.0	99	75-125		6020
Beryllium	85.0		1.0	U	80.0	106	75-125		6020
Cadmium	74.2		1.0	U	80.0	93	75-125		6020
Barium	154		74		80.0	100	75-125		6020
Chromium	75.9		2.0	U	80.0	95	75-125		6020
Copper	72.2		0.65	J	80.0	89	75-125		6020
Nickel	73.1		2.4		80.0	88	75-125		6020
Lead	70.8		1.0	U	80.0	89	75-125		6020
Selenium	74.7		2.4	J	80.0	90	75-125		6020
Cobalt	75.2		1.6		80.0	92	75-125		6020
Silver	76.3		1.0	U	80.0	95	75-125		6020
Thallium	72.3		2.0	U	80.0	90	75-125		6020
Zinc	65.1		20	U	80.0	81	75-125		6020
Molybdenum	82.9		0.21	J	80.0	103	75-125		6020
Vanadium	79.3		20	U	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-46166-G-3-B MS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	8.12		0.20	U	8.00	101	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-E MSD

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.2		80.0	99	75-125	1	20		6020
Arsenic	78.8		80.0	99	75-125	1	20		6020
Beryllium	84.2		80.0	105	75-125	1	20		6020
Cadmium	74.5		80.0	93	75-125	0	20		6020
Barium	154		80.0	100	75-125	0	20		6020
Chromium	75.2		80.0	94	75-125	1	20		6020
Copper	71.5		80.0	89	75-125	1	20		6020
Nickel	73.0		80.0	88	75-125	0	20		6020
Lead	71.0		80.0	89	75-125	0	20		6020
Selenium	75.1		80.0	91	75-125	1	20		6020
Cobalt	74.4		80.0	91	75-125	1	20		6020
Silver	76.1		80.0	95	75-125	0	20		6020
Thallium	72.5		80.0	91	75-125	0	20		6020
Zinc	65.2		80.0	81	75-125	0	20		6020
Molybdenum	83.3		80.0	104	75-125	0	20		6020
Vanadium	79.5		80.0	99	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 440-46166-G-3-C MSD

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	8.17	8.00	102	70-130	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-B PDS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	78.7		2.0	U	80.0	98	75-125		6020
Arsenic	79.6		5.0	U	80.0	99	75-125		6020
Beryllium	83.7		1.0	U	80.0	105	75-125		6020
Cadmium	74.2		1.0	U	80.0	93	75-125		6020
Barium	156		74		80.0	102	75-125		6020
Chromium	76.2		2.0	U	80.0	95	75-125		6020
Copper	73.0		0.65	J	80.0	90	75-125		6020
Nickel	74.2		2.4		80.0	90	75-125		6020
Lead	71.7		1.0	U	80.0	90	75-125		6020
Selenium	76.2		2.4	J	80.0	92	75-125		6020
Cobalt	76.2		1.6		80.0	93	75-125		6020
Silver	69.9		1.0	U	80.0	87	75-125		6020
Thallium	73.8		2.0	U	80.0	92	75-125		6020
Zinc	65.8		20	U	80.0	82	75-125		6020
Molybdenum	83.5		0.21	J	80.0	104	75-125		6020
Vanadium	80.1		20	U	80.0	100	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-G DU

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	2.0	2.0	U	2.0	U	NC		6020
Arsenic	5.0	5.0	U	5.0	U	NC		6020
Beryllium	1.0	1.0	U	1.0	U	NC		6020
Cadmium	1.0	1.0	U	1.0	U	NC		6020
Barium	5.0	74		76.7		3		6020
Chromium	2.0	2.0	U	2.0	U	NC		6020
Copper	2.0	0.65	J	0.664	J	2		6020
Nickel	2.0	2.4		2.40		0.8		6020
Lead	1.0	1.0	U	1.0	U	NC		6020
Selenium	5.0	2.4	J	2.18	J	9		6020
Cobalt	1.0	1.6		1.57		0.2		6020
Silver	1.0	1.0	U	1.0	U	NC		6020
Thallium	2.0	2.0	U	2.0	U	NC		6020
Zinc	20	20	U	20	U	NC		6020
Molybdenum	10	0.21	J	10	U	NC		6020
Vanadium	20	20	U	20	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-103356/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00017

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	82.8		104	80	120		6020
Arsenic	80.0	82.5		103	80	120		6020
Beryllium	80.0	86.3		108	80	120		6020
Cadmium	80.0	82.2		103	80	120		6020
Barium	80.0	83.7		105	80	120		6020
Chromium	80.0	81.3		102	80	120		6020
Copper	80.0	80.8		101	80	120		6020
Nickel	80.0	81.2		101	80	120		6020
Lead	80.0	79.6		99	80	120		6020
Selenium	80.0	82.8		103	80	120		6020
Cobalt	80.0	81.4		102	80	120		6020
Silver	80.0	84.9		106	80	120		6020
Thallium	80.0	79.9		100	80	120		6020
Zinc	80.0	74.8		93	80	120		6020
Molybdenum	80.0	84.5		106	80	120		6020
Vanadium	80.0	83.0		104	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-105035/2-A

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00081

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	8.00		100	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23950-J-2-A SD ^10

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-23909-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	4.0	U	20	U	NC		6020
Arsenic	7.7	J	50	U	NC		6020
Beryllium	15		15.1		3.0		6020
Cadmium	0.60	J	1.07	J	NC		6020
Barium	320		362		11		6020
Chromium	680		761		12		6020
Copper	120		138		13		6020
Nickel	620		668		8.1		6020
Lead	41		43.4		4.8		6020
Selenium	2.2	J	50	U	NC		6020
Cobalt	220		236		9.6		6020
Silver	2.0	U	10	U	NC		6020
Thallium	0.69	J	20	U	NC		6020
Zinc	380		372		NC		6020
Molybdenum	12	J	13.5	J	NC		6020
Vanadium	81		102	J	26	V	6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23909-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-23909-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23909-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-23909-1

SDG Number:

Matrix: Water Instrument ID: CV-HG2

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-23909-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-103356/1-A	05/09/2013 12:52	103356		50	50
LCS 440-103356/2-A	05/09/2013 12:52	103356		50	50
240-23710-A-3-G DU	05/09/2013 12:52	103356		50	50
240-23710-A-3-H MS	05/09/2013 12:52	103356		50	50
240-23710-A-3-E MSD	05/09/2013 12:52	103356		50	50
240-23909-9	05/09/2013 12:52	103356		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-105035/1-A	05/16/2013 12:51	105035		20	20
LCS 440-105035/2-A	05/16/2013 12:51	105035		20	20
440-46166-G-3-B MS	05/16/2013 12:51	105035		20	20
440-46166-G-3-C MSD	05/16/2013 12:51	105035		20	20
240-23909-9	05/16/2013 12:51	105035		20	20

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/09/2013 End Date: 05/09/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-103576/1	18:46	100		100		100		100		100	
STD1 440-103576/2	18:48	100		100		99		100		100	
STD2 440-103576/3	18:51	101		100		100		100		100	
STD3 440-103576/4	18:53	99		100		100		100		99	
STD4 440-103576/5	18:55	100		99		98		98		100	
ICV 440-103576/6	18:57	99		99		99		99		99	
ICB 440-103576/7	19:00	98		99		98		99		99	
CRI 440-103576/9	19:04	99		100		99		100		100	
CRI 440-103576/10	19:07	100		102		100		101		100	
ICSA 440-103576/11	19:09	91		98		97		92		91	
ICSAB 440-103576/12	19:12	92		97		98		92		91	
CCV 440-103576/14	21:55	100		112		108		108		106	
CCB 440-103576/15	21:58	99		111		108		109		106	
MB 440-103356/1-A	22:00	101		112		108		108		107	
LCS 440-103356/2-A	22:02	96		106		103		103		100	
240-23710-A-3-G DU	22:07	95		111		104		104		100	
240-23710-A-3-H MS	22:09	95		112		104		104		100	
240-23710-A-3-E MSD	22:11	95		111		103		104		100	
240-23710-A-3-B PDS	22:14	93		108		101		102		98	
240-23909-9	22:16	101		110		107		108		106	
CCV 440-103576/25	22:20	104		111		106		107		106	
CCB 440-103576/26	22:23	104		109		107		108		105	
240-23950-J-2-A SD	22:36	101		108		104		104		104	
CCV 440-103576/33	22:38	102		106		102		104		104	
CCB 440-103576/34	22:40	103		106		103		104		105	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-23909-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/09/2013 End Date: 05/09/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-103576/1	18:46	100									
STD1 440-103576/2	18:48	100									
STD2 440-103576/3	18:51	100									
STD3 440-103576/4	18:53	100									
STD4 440-103576/5	18:55	99									
ICV 440-103576/6	18:57	99									
ICB 440-103576/7	19:00	100									
CRI 440-103576/9	19:04	99									
CRI 440-103576/10	19:07	100									
ICSA 440-103576/11	19:09	96									
ICSAB 440-103576/12	19:12	95									
CCV 440-103576/14	21:55	103									
CCB 440-103576/15	21:58	104									
MB 440-103356/1-A	22:00	103									
LCS 440-103356/2-A	22:02	99									
240-23710-A-3-G DU	22:07	101									
240-23710-A-3-H MS	22:09	101									
240-23710-A-3-E MSD	22:11	101									
240-23710-A-3-B PDS	22:14	99									
240-23909-9	22:16	104									
CCV 440-103576/25	22:20	104									
CCB 440-103576/26	22:23	104									
240-23950-J-2-A SD	22:36	103									
CCV 440-103576/33	22:38	103									
CCB 440-103576/34	22:40	104									

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **June 4, 2013**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOCs, 1,4-DIOXANE, TAL METALS LOCKHEED-MIDDLE RIVER COMPLEX (MRC) SDG 240-24060-1**

SAMPLES: 5/Aqueous/
MRC-MW-96D-050613
MRC-OF-02A-050613
MRC-OF-02B-050613
MRC-OF-02C-050613
TB-050613

Overview

The sample set for Lockheed MRC, SDG 240-24060-1, consists of four (4) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for volatile organic compounds (VOCs). Samples MRC-MW-96D-050613, MRC-OF-02A-050613, MRC-OF-02B-050613, and MRC-OF-02C-050613 were analyzed for 1,4-dioxane. Sample MRC-MW-96D-050613 was analyzed for target analyte list (TAL) metals. The samples were collected by Tetra Tech May 6th, 2013 and analyzed by TestAmerica. VOC analyses were conducted using method 8260B. 1,4-dioxane analyses were conducted using method 8270D. Metals analyses were conducted using method 6020A. Mercury analyses were conducted using method 7470A

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, GC/MS tuning, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, ICP serial dilution, surrogate standard recoveries, laboratory control sample recoveries, matrix spike recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems-

- The initial calibration analyzed on 5/7/13 on instrument A3UX11 had a relative response factor < 0.05 for tert-butyl alcohol and acetone. All samples were affected. Non-detected results were qualified as rejected (UR).

- The continuing calibration analyzed on 5/17/13 on instrument A3UX11 had a relative response factor < 0.05 for tert-butyl alcohol and acetone. All samples were affected. Non-detected results were qualified as rejected (UR).

Minor Problems-

- The continuing calibration analyzed on 5/17/13 on instrument A3UX11 had a percent difference >25% for acetone, tert-butyl alcohol, 1,2,4-trichlorobenzene, naphthalene, 1,2,3-trichlorobenzene. All samples were affected. Non-detected 1,2,4-trichlorobenzene, naphthalene, 1,2,3-

trichlorobenzene results were qualified as estimated (UJ).

- The CRDL standard analyzed on 5/9/13 had a percent recovery >110% for barium, chromium, nickel, zinc, copper, and silver and a percent recovery < 90% for arsenic. Sample MRC-MW-96D-050613 was affected. The non-detected arsenic result was qualified as biased low (UL). Positive barium and nickel results were qualified as biased high (K). All other results were either non-detected or greater than 2X CRDL.

- The serial dilution had a percent difference > 10% for vanadium. The non-detected vanadium results for sample MRC-MW-96D-050613 was qualified as estimated (UJ).

Notes

Non-detected results were reported at the MDL.

The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Nickel [1]	0.57 ug/L	2.8 ug/L
Mercury [2]	0.1 ug/L	0.5 ug/L
Antimony [3]	0.33 ug/L	1.65 ug/L
Cobalt [3]	0.11 ug/L	0.55 ug/L
Silver [3]	0.10 ug/L	0.55 ug/L

[1] Maximum concentration found in preparation blank affecting sample MRC-MW-96D-050613.
[2] Maximum concentration found in a calibration blank affecting MRC-MW-96D-050613.
[3] Maximum concentration found in a calibration blank affecting sample MRC-MW-96D-050613.

An action level of 5X or 10X (methylene chloride) the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was warranted as sample results were wither non-detected or greater than the blank action level.

The laboratory control spike had a percent recovery less than the lower control limit for tert-butyl alcohol. No validation action was warranted as sample results were previously qualified as rejected.

Sample MRC-OF-02A-050613 had limited sample volume which for the 1,4-dioxane analysis which resulted in slightly elevated MDL.

No MS/MSD was provided for 1,4-dioxane analyses.

Executive Summary

Laboratory Performance: Continuing calibration and CRDL non-compliances for acetone, tert-butyl alcohol, 1,2,4-trichlorobenzene, naphthalene, 1,2,3-trichlorobenzene, barium, chromium, nickel, zinc, copper, silver, arsenic resulted in the qualification of sample results.

Other Factors Affecting Data Quality: The serial dilution non-compliance resulted in the qualification of a vanadium result.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993) and U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04795	NSAMPLE	MRC-MW-96D-050613			MRC-OF-02A-050613			MRC-OF-02B-050613			MRC-OF-02C-050613		
SDG: 240-24060-1	LAB_ID	240-24060-5			240-24060-4			240-24060-3			240-24060-2		
FRACTION: OV	SAMP_DATE	5/6/2013			5/6/2013			5/6/2013			5/6/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	UJ	C	0.17	UJ	C	0.17	UJ	C	0.17	UJ	C
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	UJ	C	0.15	UJ	C	0.15	UJ	C	0.15	UJ	C
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE		1.1	UR	C	1.1	UR	C	1.1	UR	C	1.1	UR	C
BENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.13	U	

PROJ_NO: 04795	NSAMPLE	TB-050613
SDG: 240-24060-1	LAB_ID	240-24060-1
FRACTION: OV	SAMP_DATE	5/6/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U	
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	UJ	C
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	UJ	C
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U	
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.1	UR	C
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	
CARBON DISULFIDE	0.13	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96D-050613			MRC-OF-02A-050613			MRC-OF-02B-050613			MRC-OF-02C-050613		
SDG: 240-24060-1	LAB_ID	240-24060-5			240-24060-4			240-24060-3			240-24060-2		
FRACTION: OV	SAMP_DATE	5/6/2013			5/6/2013			5/6/2013			5/6/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	UJ	C	0.24	UJ	C	0.24	UJ	C	0.24	UJ	C
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERT-BUTYLDIMETHYLSILANOL													
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	U		0.19	U		0.19	U		0.19	U	

PROJ_NO: 04795	NSAMPLE	TB-050613
SDG: 240-24060-1	LAB_ID	240-24060-1
FRACTION: OV	SAMP_DATE	5/6/2013
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U	
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	UJ	C
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERT-BUTYLDIMETHYLSILANOL	1.7	R	Z2
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	
TRICHLOROETHENE	0.17	U	
TRICHLOROFLUOROMETHANE	0.21	U	
VINYL ACETATE	0.19	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96D-050613			MRC-OF-02A-050613			MRC-OF-02B-050613			MRC-OF-02C-050613		
SDG: 240-24060-1	LAB_ID	240-24060-5			240-24060-4			240-24060-3			240-24060-2		
FRACTION: OV	SAMP_DATE	5/6/2013			5/6/2013			5/6/2013			5/6/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04795	NSAMPLE	TB-050613		
SDG: 240-24060-1	LAB_ID	240-24060-1		
FRACTION: OV	SAMP_DATE	5/6/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96D-050613			MRC-OF-02A-050613			MRC-OF-02B-050613			MRC-OF-02C-050613		
SDG: 240-24060-1	LAB_ID	240-24060-5			240-24060-4			240-24060-3			240-24060-2		
FRACTION: OS	SAMP_DATE	5/6/2013			5/6/2013			5/6/2013			5/6/2013		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U		0.49	U		0.47	U		0.47	U	

PROJ_NO: 04795	NSAMPLE	MRC-MW-96D-050613		
SDG: 240-24060-1	LAB_ID	240-24060-5		
FRACTION: M	SAMP_DATE	5/6/2013		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.3	U	
ARSENIC		0.9	UL	C
BARIUM		6.1	K	C
BERYLLIUM		0.12	J	P
CADMIUM		0.12	J	P
CHROMIUM		0.9	U	
COBALT		1.9		
COPPER		4.1		
LEAD		0.2	U	
MERCURY		0.1	U	
MOLYBDENUM		0.2	U	
NICKEL		3.8	K	C
SELENIUM		0.5	U	
SILVER		0.1	U	
THALLIUM		0.2	U	
VANADIUM		0.8	UJ	I
ZINC		4	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-MW-96D-050613 | Lab Sample ID: 240-24060-5

Matrix: Water | Lab File ID: UXJ1700.D

Analysis Method: 8260B | Date Collected: 05/06/2013 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-MW-96D-050613 | Lab Sample ID: 240-24060-5

Matrix: Water | Lab File ID: UXJ1700.D

Analysis Method: 8260B | Date Collected: 05/06/2013 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-MW-96D-050613 | Lab Sample ID: 240-24060-5

Matrix: Water | Lab File ID: UXJ1700.D

Analysis Method: 8260B | Date Collected: 05/06/2013 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	86		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-MW-96D-050613 Lab Sample ID: 240-24060-5

Matrix: Water Lab File ID: UXJ1700.D

Analysis Method: 8260B Date Collected: 05/06/2013 14:55

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 17:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02A-050613 | Lab Sample ID: 240-24060-4

Matrix: Water | Lab File ID: UXJ1699.D

Analysis Method: 8260B | Date Collected: 05/06/2013 12:31

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02A-050613 | Lab Sample ID: 240-24060-4

Matrix: Water | Lab File ID: UXJ1699.D

Analysis Method: 8260B | Date Collected: 05/06/2013 12:31

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02A-050613 | Lab Sample ID: 240-24060-4

Matrix: Water | Lab File ID: UXJ1699.D

Analysis Method: 8260B | Date Collected: 05/06/2013 12:31

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	81		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02A-050613 Lab Sample ID: 240-24060-4

Matrix: Water Lab File ID: UXJ1699.D

Analysis Method: 8260B Date Collected: 05/06/2013 12:31

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 17:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02B-050613 | Lab Sample ID: 240-24060-3

Matrix: Water | Lab File ID: UXJ1698.D

Analysis Method: 8260B | Date Collected: 05/06/2013 11:44

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02B-050613 | Lab Sample ID: 240-24060-3

Matrix: Water | Lab File ID: UXJ1698.D

Analysis Method: 8260B | Date Collected: 05/06/2013 11:44

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02B-050613 | Lab Sample ID: 240-24060-3

Matrix: Water | Lab File ID: UXJ1698.D

Analysis Method: 8260B | Date Collected: 05/06/2013 11:44

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 17:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02B-050613 Lab Sample ID: 240-24060-3

Matrix: Water Lab File ID: UXJ1698.D

Analysis Method: 8260B Date Collected: 05/06/2013 11:44

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 17:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02C-050613 | Lab Sample ID: 240-24060-2

Matrix: Water | Lab File ID: UXJ1697.D

Analysis Method: 8260B | Date Collected: 05/06/2013 10:53

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 16:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02C-050613 Lab Sample ID: 240-24060-2

Matrix: Water Lab File ID: UXJ1697.D

Analysis Method: 8260B Date Collected: 05/06/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 16:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02C-050613 Lab Sample ID: 240-24060-2

Matrix: Water Lab File ID: UXJ1697.D

Analysis Method: 8260B Date Collected: 05/06/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 16:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	92		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
2037-26-5	Toluene-d8 (Surr)	88		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02C-050613 Lab Sample ID: 240-24060-2

Matrix: Water Lab File ID: UXJ1697.D

Analysis Method: 8260B Date Collected: 05/06/2013 10:53

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 16:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: TB-050613 Lab Sample ID: 240-24060-1

Matrix: Water Lab File ID: UXJ1696.D

Analysis Method: 8260B Date Collected: 05/06/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 16:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: TB-050613 | Lab Sample ID: 240-24060-1

Matrix: Water | Lab File ID: UXJ1696.D

Analysis Method: 8260B | Date Collected: 05/06/2013 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 16:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U *	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: TB-050613 Lab Sample ID: 240-24060-1

Matrix: Water Lab File ID: UXJ1696.D

Analysis Method: 8260B Date Collected: 05/06/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 16:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
1868-53-7	Dibromofluoromethane (Surr)	84		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: TB-050613 Lab Sample ID: 240-24060-1

Matrix: Water Lab File ID: UXJ1696.D

Analysis Method: 8260B Date Collected: 05/06/2013 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 16:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.7

CAS NO.	COMPOUND NAME	RT	RESULT	Q
18173-64-3	tert-Butyldimethylsilanol	4.05	1.7	T J N

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-MW-96D-050613 | Lab Sample ID: 240-24060-5

Matrix: Water | Lab File ID: 30516013.D

Analysis Method: 8270D | Date Collected: 05/06/2013 14:55

Extract. Method: 3520C | Date Extracted: 05/12/2013 11:25

Sample wt/vol: 1050(mL) | Date Analyzed: 05/16/2013 14:26

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 86134 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	74		20-110
367-12-4	2-Fluorophenol (Surr)	72		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	83		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	70		21-110
4165-62-2	Phenol-d5 (Surr)	74		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02A-050613 | Lab Sample ID: 240-24060-4

Matrix: Water | Lab File ID: 30516014.D

Analysis Method: 8270D | Date Collected: 05/06/2013 12:31

Extract. Method: 3520C | Date Extracted: 05/12/2013 11:25

Sample wt/vol: 1000(mL) | Date Analyzed: 05/16/2013 14:53

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 86134 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	67		20-110
367-12-4	2-Fluorophenol (Surr)	69		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	70		21-110
1718-51-0	Terphenyl-d14 (Surr)	57		24-110

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02B-050613 | Lab Sample ID: 240-24060-3

Matrix: Water | Lab File ID: 30516011.D

Analysis Method: 8270D | Date Collected: 05/06/2013 11:44

Extract. Method: 3520C | Date Extracted: 05/12/2013 11:25

Sample wt/vol: 1050(mL) | Date Analyzed: 05/16/2013 13:33

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 86134 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		20-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	51		21-110
4165-62-2	Phenol-d5 (Surr)	53		21-110
1718-51-0	Terphenyl-d14 (Surr)	41		24-110

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: MRC-OF-02C-050613 | Lab Sample ID: 240-24060-2

Matrix: Water | Lab File ID: 30516012.D

Analysis Method: 8270D | Date Collected: 05/06/2013 10:53

Extract. Method: 3520C | Date Extracted: 05/12/2013 11:25

Sample wt/vol: 1050(mL) | Date Analyzed: 05/16/2013 14:00

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 86134 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	67		20-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	65		21-110
4165-62-2	Phenol-d5 (Surr)	67		21-110
1718-51-0	Terphenyl-d14 (Surr)	55		24-110

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW-96D-050613 Lab Sample ID: 240-24060-5

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG ID.:

Matrix: Water Date Sampled: 05/06/2013 14:55

Reporting Basis: WET Date Received: 05/07/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.30	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.90	ug/L	U		1	6020
7440-41-7	Beryllium	0.12	1.0	0.10	ug/L	J		1	6020
7440-43-9	Cadmium	0.12	1.0	0.10	ug/L	J		1	6020
7440-39-3	Barium	6.1	5.0	0.30	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.90	ug/L	U		1	6020
7440-50-8	Copper	4.1	2.0	0.50	ug/L			1	6020
7440-02-0	Nickel	3.8	2.0	0.50	ug/L		B	1	6020
7439-92-1	Lead	1.0	1.0	0.20	ug/L	U		1	6020
7782-49-2	Selenium	5.0	5.0	0.50	ug/L	U		1	6020
7440-48-4	Cobalt	1.9	1.0	0.10	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.10	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.20	ug/L	U		1	6020
7440-66-6	Zinc	20	20	4.0	ug/L	U		1	6020
7439-98-7	Molybdenum	10	10	0.20	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.80	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW-96D-050613 Lab Sample ID: 240-24060-5

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG ID.:

Matrix: Water Date Sampled: 05/06/2013 14:55

Reporting Basis: WET Date Received: 05/07/2013 09:10

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.10	ug/L	U		1	7470A

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact

Company Name: Tetra Tech INC	Client Project Manager: Tony Apanavage	Site Contact: Walt Pyron	Lab Contact: Pat O'Meara
Address: 20251 Century Blvd	Telephone: 301 528-3021	Telephone: 301 951-3914	Telephone: 334-497-9396
City/State/Zip: Germantown MD 20874	Email:		
Phone: 301 528-3075			
Project Name: MRC - Ground Water Sampling	Method of Shipment/Carrier: Fed Ex		
Project Number: 112IC04795-02	Shipping/Tracking No:		

COC No: 1 of 1 COCs

Analysis Turnaround Time (in BUSINESS days)
TAT if different from below _____
☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day

Filtered Sample (Y/N)
Perform MS/MSD (Y/N)

Analyses: VOCs; Total metals; 1,4 Dioxane

PO#

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs	Total metals	1,4 Dioxane	Sample Specific Notes / Special Instructions:
TB-050613	5-6-13	—		X						2					N	N	X			
MRC-OF-02C-050613		1053		X						3			2				X		X	
MRC-OF-02B-050613		1144		X						3			1				X		X	
MRC-OF-02A-050613		1231		X						3			2				X		X	
MRC-MW-960-050613		1455		X					1	3			2				X	X	X	

240-24060 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by: Walt Pyron	Company: TT INC	Date/Time: 5-6-13 / 1600	Received by: Paul Hymel	Company: TestAmerica	Date/Time: 5/6/13 / 1650
Relinquished by: Paul Hymel	Company: TestAmerica	Date/Time: 5/6/13 / 1650	Received by: Kenneth Smith	Company: TAL	Date/Time: 5/7/13 910
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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TAL-0018 (1008)

CASE NARRATIVE

Client: Tetra Tech, Inc

Project: MRC Groundwater Sampling

Report Number: 240-24060-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals and the 7470A Mercury analyses were performed at the TestAmerica Irvine laboratory.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available Any exceptions to NELAP requirements are noted in this report Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client

RECEIPT
The samples were received on 05/07/2013; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.4 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples TB-050613 (240-24060-1), MRC-OF-02C-050613 (240-24060-2), MRC-OF-02B-050613 (240-24060-3), MRC-OF-02A-050613 (240-24060-4) and MRC-MW-96D-050613 (240-24060-5) were analyzed for volatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/17/2013.

The laboratory control sample (LCS) for batch 86304 recovered outside control limits for the following analyte(s): 2-Methyl-2-propanol. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MRC-OF-02C-050613 (240-24060-2), MRC-OF-02B-050613 (240-24060-3), MRC-OF-02A-050613 (240-24060-4) and MRC-MW-96D-050613 (240-24060-5) were analyzed for semivolatile organic compounds (GC-MS)in accordance with EPA SW-846 Method 8270D. The samples were prepared on 05/12/2013 and analyzed on 05/16/2013.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 85576.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Sample MRC-MW-96D-050613 (240-24060-5) was analyzed for total recoverable metals (ICPMS)in accordance with EPA SW-846 Method 6020. The samples were prepared and analyzed on 05/09/2013.

Nickel was detected in method blank MB 440-103356/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL

and/or RL, the result has been "B" flagged.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Sample MRC-MW-96D-050613 (240-24060-5) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 05/20/2013.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

Sample Report

MRC-MW-96D-050613

Sample Table

Sample Name	240-24060-d-5-a
Data File Name	093SMPL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\1305
Acq Date Time	2013-05-09T22:18:30-07:00
Sample Type	Sample
Dilution	1
Comment	CAM 6020 440-103356 YS
ISTD Ref FileName	002CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

6.135 ug/L reported as 6.1 ug/L

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	Conc	FinalConc	Conc %RSD	CPS	%RSD	LDR	QC Flag
Be	9	1	No Gas	0.124	0.124	5.15	1559	5.09	3000	
Na	23	1	No Gas	3116.758	3116.758	1.02	136934608	0.75	100000	
Mg	24	1	No Gas	218.824	218.824	2.97	6316386	2.84	112500	
Al	27	1	No Gas	45.802	45.802	6.93	1638296	6.79	4000	
K	39	1	No Gas	1762.914	1762.914	1.44	65174515	1.33	87500	
Ca	44	1	No Gas	492.128	492.128	0.81	557456	0.71	225000	
V	51	1	No Gas	0.373	0.373	9.84	5774	26.30	4000	
Cr	52	1	No Gas	0.142	0.142	20.70	37606	2.85	4000	
Mn	55	1	No Gas	9.881	9.881	0.83	448839	0.76	4000	
Fe	56	1	No Gas	15.136	15.136	2.76	3111824	0.71	40000	
Co	59	1	No Gas	1.927	1.927	0.18	69941	0.42	4000	
Ni	60	1	No Gas	3.766	3.766	0.80	31677	0.89	4000	
Cu	65	1	No Gas	4.087	4.087	1.73	39247	1.33	4000	
Zn	66	1	No Gas	3.521	3.521	2.25	44963	1.66	2500	
As	75	1	No Gas	0.033	0.033	1485.51	304	708.73	4000	
Se	82	1	No Gas	0.150	0.150	125.73	94	63.17	4000	
Sr	88	1	No Gas	6.360	6.360	1.43	286701	0.32	4000	
Mo	95	1	No Gas	0.087	0.087	8.15	816	6.19	4000	
[Mo]	98	1	No Gas	0.080	0.080	9.40	1234	6.60	4000	
Ag	107	1	No Gas	0.029	0.029	8.48	826	7.11	100	
Cd	111	1	No Gas	0.118	0.118	7.58	491	7.84	4000	
[Cd]	114	1	No Gas	0.118	0.118	5.17	1078	3.47	4000	
Sn	118	1	No Gas	0.097	0.097	15.03	1635	11.84	4000	
Sb	123	1	No Gas	0.047	0.047	24.12	1371	9.51	4000	
Ba	137	1	No Gas	6.135	6.135	1.70	35877	0.08	4000	
Ce	140	1	No Gas	0.135	0.135	2.08	7361	3.61	4000	
Tl	205	1	No Gas	0.052	0.052	3.44	1785	2.75	4000	
Pb	208	1	No Gas	0.122	0.122	4.24	5688	3.37	4000	
U	238	1	No Gas	0.092	0.092	2.69	4811	2.11	4000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li (IS)	6	1	No Gas	3038224	1.32	2953142	102.88	60	120	
Sc-45 (IS)	45	1	No Gas	3671194	0.26	3369156	108.96	60	120	
Ge (IS)	72	1	No Gas	656442	0.78	616088	106.55	60	120	
Ge (IS)	74	1	No Gas	895279	0.88	842406	106.28	60	120	
In-115 (IS)	115	1	No Gas	3705473	1.65	3522092	105.21	60	120	
Tb-159 (IS)	159	1	No Gas	4926545	0.61	4776648	103.14	60	120	

TestAmerica Canton Sample Receipt Form/Narrative Login # : 24060
Canton Facility

Client TETRA TECH Site Name _____ Cooler unpacked by:

Cooler Received on 5-7-13 Opened on 5-7-13

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop-Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box (Client Cooler) Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF –0 °C) Observed Cooler Temp. 2.4 °C	Corrected Cooler Temp. 2.4 °C	☐ See Multiple Cooler Form
IR GUN# 4G	(CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 5G	(CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN# 8	(CF +1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No	
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes) No	NA
-Were custody seals on the bottle(s)?	Yes (No)	
3. Shippers' packing slip attached to the cooler(s)?	(Yes) No	
4. Did custody papers accompany the sample(s)?	(Yes) No	
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6. Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
7. Could all bottle labels be reconciled with the COC?	(Yes) No	
8. Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
9. Sufficient quantity received to perform indicated analyses?	(Yes) No	
10. Were sample(s) at the correct pH upon receipt?	(Yes) No	NA pH Strip Lot# HC379740
11. Were VOAs on the COC?	(Yes) No	
12. Were air bubbles >6 mm in any VOA vials?	Yes (No)	NA
13. Was a trip blank present in the cooler(s)?	(Yes) No	

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MRC-MW-96D-050613	240-24060-D-5	Plastic 500ml - with Nitric Acid	<2	_____	_____

Login Sample Receipt Checklist

Client: Tetra Tech, Inc

Job Number: 240-24060-1

Login Number: 24060
List Number: 1
Creator: Soderblom, Tim

List Source: TestAmerica Irvine
List Creation: 05/08/13 03:10 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

HOLD TIME

SDG 240-24060-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW-96D-050613	240-24060-5	NM	5/6/2013	5/20/2013	5/20/2013	14	0	14
M	UG/L	MRC-MW-96D-050613	240-24060-5	NM	5/6/2013	5/9/2013	5/9/2013	3	0	3
OS	UG/L	MRC-OF04B-050713	240-24093-3	NM	5/7/2013	5/12/2013	5/16/2013	5	4	9
OS	UG/L	MRC-MW-96D-050613	240-24060-5	NM	5/6/2013	5/12/2013	5/16/2013	6	4	10
OS	UG/L	MRC-OF-02A-050613	240-24060-4	NM	5/6/2013	5/12/2013	5/16/2013	6	4	10
OS	UG/L	MRC-OF-02B-050613	240-24060-3	NM	5/6/2013	5/12/2013	5/16/2013	6	4	10
OS	UG/L	MRC-OF-02C-050613	240-24060-2	NM	5/6/2013	5/12/2013	5/16/2013	6	4	10
OS	UG/L	MRC-OF-03A-050713	240-24093-5	NM	5/7/2013	5/12/2013	5/16/2013	5	4	9
OS	UG/L	MRC-OF-03B-050713	240-24093-6	NM	5/7/2013	5/12/2013	5/16/2013	5	4	9
OS	UG/L	MRC-OF-03C-050713	240-24093-7	NM	5/7/2013	5/12/2013	5/18/2013	5	6	11
OS	UG/L	MRC-OF04A-050713	240-24093-2	NM	5/7/2013	5/12/2013	5/16/2013	5	4	9
OV	UG/L	MRC-OF-02A-050613	240-24060-4	NM	5/6/2013	5/17/2013	5/17/2013	11	0	11
OV	UG/L	TB-050713	240-24093-1	NM	5/7/2013	5/20/2013	5/20/2013	13	0	13
OV	UG/L	MRC-OF-02B-050613	240-24060-3	NM	5/6/2013	5/17/2013	5/17/2013	11	0	11
OV	UG/L	MRC-OF-02C-050613	240-24060-2	NM	5/6/2013	5/17/2013	5/17/2013	11	0	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MRC-OF-03A-050713	240-24093-5	NM	5/7/2013	5/18/2013	5/18/2013	11	0	11
OV	UG/L	MRC-OF-03B-050713	240-24093-6	NM	5/7/2013	5/18/2013	5/18/2013	11	0	11
OV	UG/L	MRC-OF-03C-050713	240-24093-7	NM	5/7/2013	5/18/2013	5/18/2013	11	0	11
OV	UG/L	MRC-OF04A-050713	240-24093-2	NM	5/7/2013	5/18/2013	5/18/2013	11	0	11
OV	UG/L	MRC-OF04B-050713	240-24093-3	NM	5/7/2013	5/18/2013	5/18/2013	11	0	11
OV	UG/L	MRC-OF04C-050713	240-24093-4	NM	5/7/2013	5/18/2013	5/18/2013	11	0	11
OV	UG/L	TB-050613	240-24060-1	NM	5/6/2013	5/17/2013	5/17/2013	11	0	11
OV	UG/L	MRC-MW-96D-050613	240-24060-5	NM	5/6/2013	5/17/2013	5/17/2013	11	0	11

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab File ID: UXJ1682.D Lab Sample ID: MB 240-86304/5

Matrix: Water Heated Purge: (Y/N) N

Instrument ID: A3UX11 Date Analyzed: 05/17/2013 11:02

GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-86304/4	UXJ1680.D	05/17/2013 10:17
	240-24055-F-10 MS	UXJ1688.D	05/17/2013 13:18
	240-24055-H-10 MSD	UXJ1689.D	05/17/2013 13:41
TB-050613	240-24060-1	UXJ1696.D	05/17/2013 16:20
MRC-OF-02C-050613	240-24060-2	UXJ1697.D	05/17/2013 16:43
MRC-OF-02B-050613	240-24060-3	UXJ1698.D	05/17/2013 17:05
MRC-OF-02A-050613	240-24060-4	UXJ1699.D	05/17/2013 17:28
MRC-MW-96D-050613	240-24060-5	UXJ1700.D	05/17/2013 17:51

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-86304/5

Matrix: Water | Lab File ID: UXJ1682.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 11:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-86304/5

Matrix: Water Lab File ID: UXJ1682.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 11:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-86304/5

Matrix: Water | Lab File ID: UXJ1682.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2013 11:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 86304 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
1868-53-7	Dibromofluoromethane (Surr)	87		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
2037-26-5	Toluene-d8 (Surr)	89		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-86304/5

Matrix: Water Lab File ID: UXJ1682.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/17/2013 11:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 86304 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1680.D

Lab ID: LCS 240-86304/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	9.38	47	43-136	
Benzene	10.0	9.72	97	83-112	
Bromobenzene	10.0	9.56	96	76-115	
Bromochloromethane	10.0	8.89	89	77-120	
Bromodichloromethane	10.0	9.99	100	72-121	
Bromoform	10.0	8.90	89	40-131	
Bromomethane	10.0	10.8	108	11-185	
2-Butanone	20.0	17.0	85	60-126	
Carbon disulfide	10.0	9.70	97	62-142	
Carbon tetrachloride	10.0	9.13	91	66-128	
Chlorobenzene	10.0	9.79	98	85-110	
Chloroethane	10.0	11.2	112	25-153	
2-Chloroethyl vinyl ether	10.0	9.32 J	93	52-131	
Chloroform	10.0	9.42	94	79-117	
Chloromethane	10.0	8.48	85	44-126	
2-Chlorotoluene	10.0	9.84	98	76-116	
4-Chlorotoluene	10.0	9.57	96	77-115	
cis-1,2-Dichloroethene	10.0	9.70	97	80-113	
cis-1,3-Dichloropropene	10.0	9.30	93	61-115	
Dibromochloromethane	10.0	9.42	94	64-119	
1,2-Dibromo-3-Chloropropane	10.0	8.03	80	42-136	
1,2-Dibromoethane	10.0	9.08	91	79-113	
Dibromomethane	10.0	9.82	98	81-120	
1,2-Dichlorobenzene	10.0	9.04	90	81-110	
1,3-Dichlorobenzene	10.0	9.14	91	80-110	
1,4-Dichlorobenzene	10.0	9.08	91	82-110	
Dichlorodifluoromethane	10.0	7.72	77	19-129	
1,1-Dichloroethane	10.0	9.80	98	82-115	
1,2-Dichloroethane	10.0	9.85	98	71-127	
1,1-Dichloroethene	10.0	8.81	88	78-131	
1,2-Dichloropropane	10.0	10.0	100	81-115	
1,3-Dichloropropane	10.0	9.79	98	79-116	
2,2-Dichloropropane	10.0	8.27	83	50-129	
1,1-Dichloropropene	10.0	9.80	98	83-114	
Diisopropyl ether	10.0	9.71	97	77-118	
Ethylbenzene	10.0	9.66	97	83-112	
Hexachlorobutadiene	10.0	7.75	77	36-134	
2-Hexanone	20.0	19.3	97	55-133	
Isopropylbenzene	10.0	10.1	101	75-114	
Methylene Chloride	10.0	8.48	85	66-131	
4-Methyl-2-pentanone	20.0	19.2	96	63-128	
Methyl tert-butyl ether	10.0	8.17	82	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1680.D

Lab ID: LCS 240-86304/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.9	99	83-113	
Naphthalene	10.0	5.91	59	32-141	
n-Butylbenzene	10.0	9.53	95	66-125	
n-Propylbenzene	10.0	9.79	98	74-121	
o-Xylene	10.0	10.4	104	83-113	
p-Isopropyltoluene	10.0	10.0	100	74-120	
sec-Butylbenzene	10.0	9.37	94	70-117	
Styrene	10.0	10.5	105	79-114	
tert-Butyl alcohol	200	124	62	70-130	*
tert-Butylbenzene	10.0	9.64	96	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.68	97	72-116	
1,1,2,2-Tetrachloroethane	10.0	9.31	93	68-118	
Tetrachloroethene	10.0	9.58	96	79-114	
Toluene	10.0	9.52	95	84-111	
trans-1,2-Dichloroethene	10.0	9.22	92	83-117	
trans-1,3-Dichloropropene	10.0	9.63	96	58-117	
1,2,3-Trichlorobenzene	10.0	6.66	67	54-126	
1,2,4-Trichlorobenzene	10.0	7.62	76	48-135	
1,1,1-Trichloroethane	10.0	8.88	89	74-118	
Trichloroethene	10.0	9.32	93	76-117	
Trichlorofluoromethane	10.0	10.3	103	49-157	
1,2,3-Trichloropropane	10.0	9.96	100	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.1	111	74-151	
1,2,3-Trimethylbenzene	10.0	9.97	100	70-130	
1,2,4-Trimethylbenzene	10.0	9.67	97	76-120	
Vinyl acetate	10.0	9.08	91	46-161	
Vinyl chloride	10.0	9.89	99	53-127	
Xylenes, Total	30.0	30.3	101	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Not our Sample

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1688.D

Lab ID: 240-24055-F-10 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	20.0	19	29.4	55	33-145	
Benzene	10.0	1.0 U	9.16	92	72-121	
Bromobenzene	10.0	1.0 U	10.2	102	71-116	
Bromochloromethane	10.0	1.0 U	8.35	84	73-121	
Bromodichloromethane	10.0	1.0 U	9.16	92	67-120	
Bromoform	10.0	1.0 U	8.60	86	32-128	
Bromomethane	10.0	1.0 U	8.57	86	10-186	
2-Butanone	20.0	0.82 J	18.1	86	54-129	
Carbon disulfide	10.0	1.0 U	10.6	106	57-147	
Carbon tetrachloride	10.0	1.0 U	8.61	86	59-129	
Chlorobenzene	10.0	1.0 U	9.39	94	80-110	
Chloroethane	10.0	1.0 U	11.3	113	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0	10-150	F
Chloroform	10.0	1.0 U	8.94	89	76-118	
Chloromethane	10.0	1.0 U	7.36	74	33-132	
2-Chlorotoluene	10.0	1.0 U	9.99	100	69-117	
4-Chlorotoluene	10.0	1.0 U	10.3	103	71-116	
cis-1,2-Dichloroethene	10.0	1.0 U	9.18	92	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	8.74	87	51-110	
Dibromochloromethane	10.0	1.0 U	9.13	91	56-118	
1,2-Dibromo-3-Chloropropane	10.0	5.0 U	9.92	99	32-139	
1,2-Dibromoethane	10.0	1.0 U	8.94	89	74-113	
Dibromomethane	10.0	1.0 U	9.31	93	77-121	
1,2-Dichlorobenzene	10.0	1.0 U	9.33	93	75-111	
1,3-Dichlorobenzene	10.0	1.0 U	8.94	89	73-110	
1,4-Dichlorobenzene	10.0	1.0 U	8.96	90	75-110	
Dichlorodifluoromethane	10.0	1.0 U	7.63	76	17-128	
1,1-Dichloroethane	10.0	1.0 U	9.49	95	79-116	
1,2-Dichloroethane	10.0	1.0 U	9.07	91	68-129	
1,1-Dichloroethene	10.0	1.0 U	8.69	87	74-135	
1,2-Dichloropropane	10.0	1.0 U	9.61	96	78-115	
1,3-Dichloropropane	10.0	1.0 U	9.11	91	74-118	
2,2-Dichloropropane	10.0	1.0 U	7.91	79	38-127	
1,1-Dichloropropene	10.0	1.0 U	9.23	92	80-114	
Diisopropyl ether	10.0	5.0 U	9.35	93	73-118	
Ethylbenzene	10.0	1.0 U	9.24	92	75-116	
Hexachlorobutadiene	10.0	1.0 U	6.46	65	27-132	
2-Hexanone	20.0	5.0 U	23.8	119	47-139	
Isopropylbenzene	10.0	1.1	11.3	102	68-116	
Methylene Chloride	10.0	1.0 U	7.60	76	63-128	
4-Methyl-2-pentanone	20.0	5.0 U	20.2	101	56-131	
Methyl tert-butyl ether	10.0	4.8	10.5	57	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1688.D

Lab ID: 240-24055-F-10 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	2.0 U	18.7	94	75-117	
Naphthalene	10.0	1.3	8.42	71	15-158	
n-Butylbenzene	10.0	1.7	10.9	92	56-127	
n-Propylbenzene	10.0	0.40 J	11.3	109	64-124	
o-Xylene	10.0	1.0 U	10.2	102	76-116	
p-Isopropyltoluene	10.0	1.0 U	9.80	98	64-122	
sec-Butylbenzene	10.0	2.8	12.5	97	60-119	
Styrene	10.0	1.0 U	10.1	101	71-117	
tert-Butyl alcohol	200	20 U	130	65	70-130	F
tert-Butylbenzene	10.0	0.33 J	10.2	99	61-119	
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.22	92	64-118	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	10.2	102	63-122	
Tetrachloroethene	10.0	1.0 U	8.68	87	70-117	
Toluene	10.0	0.74 J	12.3	115	78-114	F
trans-1,2-Dichloroethene	10.0	1.0 U	8.98	90	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	8.73	87	46-116	
1,2,3-Trichlorobenzene	10.0	1.0 U	6.72	67	45-129	
1,2,4-Trichlorobenzene	10.0	1.0 U	7.92	79	38-138	
1,1,1-Trichloroethane	10.0	1.0 U	8.84	88	68-121	
Trichloroethene	10.0	1.0 U	9.10	91	66-120	
Trichlorofluoromethane	10.0	1.0 U	11.1	111	46-157	
1,2,3-Trichloropropane	10.0	1.0 U	11.5	115	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	11.3	113	70-152	
1,2,3-Trimethylbenzene	10.0	5.0 U	9.82	98	70-130	
1,2,4-Trimethylbenzene	10.0	1.0 U	9.81	98	67-124	
Vinyl acetate	10.0	2.0 U	8.89	89	43-157	
Vinyl chloride	10.0	1.0 U	9.63	96	49-130	
Xylenes, Total	30.0	2.0 U	28.9	96	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III

GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Not our Sample

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1689.D

Lab ID: 240-24055-H-10 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	20.0	34.4	80	16	30	33-145	
Benzene	10.0	8.58	86	7	30	72-121	
Bromobenzene	10.0	8.09	81	23	30	71-116	
Bromochloromethane	10.0	7.66	77	9	30	73-121	
Bromodichloromethane	10.0	8.87	89	3	30	67-120	
Bromoform	10.0	8.18	82	5	30	32-128	
Bromomethane	10.0	8.56	86	0	30	10-186	
2-Butanone	20.0	18.0	86	0	30	54-129	
Carbon disulfide	10.0	9.88	99	7	30	57-147	
Carbon tetrachloride	10.0	8.41	84	2	30	59-129	
Chlorobenzene	10.0	8.33	83	12	30	80-110	
Chloroethane	10.0	9.84	98	13	30	21-165	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
Chloroform	10.0	8.37	84	7	30	76-118	
Chloromethane	10.0	6.88	69	7	30	33-132	
2-Chlorotoluene	10.0	8.07	81	21	30	69-117	
4-Chlorotoluene	10.0	8.16	82	23	30	71-116	
cis-1,2-Dichloroethene	10.0	8.40	84	9	30	70-120	
cis-1,3-Dichloropropene	10.0	8.09	81	8	30	51-110	
Dibromochloromethane	10.0	8.39	84	9	30	56-118	
1,2-Dibromo-3-Chloropropane	10.0	9.41	94	5	30	32-139	
1,2-Dibromoethane	10.0	8.64	86	3	30	74-113	
Dibromomethane	10.0	9.05	91	3	30	77-121	
1,2-Dichlorobenzene	10.0	7.56	76	21	30	75-111	
1,3-Dichlorobenzene	10.0	7.52	75	17	30	73-110	
1,4-Dichlorobenzene	10.0	7.61	76	16	30	75-110	
Dichlorodifluoromethane	10.0	7.98	80	4	30	17-128	
1,1-Dichloroethane	10.0	8.97	90	6	30	79-116	
1,2-Dichloroethane	10.0	8.51	85	6	30	68-129	
1,1-Dichloroethene	10.0	8.04	80	8	30	74-135	
1,2-Dichloropropane	10.0	8.74	87	9	30	78-115	
1,3-Dichloropropane	10.0	8.72	87	4	30	74-118	
2,2-Dichloropropane	10.0	7.62	76	4	30	38-127	
1,1-Dichloropropene	10.0	8.68	87	6	30	80-114	
Diisopropyl ether	10.0	8.74	87	7	30	73-118	
Ethylbenzene	10.0	8.81	88	5	30	75-116	
Hexachlorobutadiene	10.0	5.12	51	23	30	27-132	
2-Hexanone	20.0	20.7	103	14	30	47-139	
Isopropylbenzene	10.0	9.86	88	13	30	68-116	
Methylene Chloride	10.0	7.18	72	6	30	63-128	
4-Methyl-2-pentanone	20.0	19.8	99	2	30	56-131	
Methyl tert-butyl ether	10.0	13.0	82	21	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXJ1689.D

Lab ID: 240-24055-H-10 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	16.6	83	12	30	75-117	
Naphthalene	10.0	8.78	74	4	30	15-158	
n-Butylbenzene	10.0	9.32	76	16	30	56-127	
n-Propylbenzene	10.0	8.68	83	26	30	64-124	
o-Xylene	10.0	9.04	90	12	30	76-116	
p-Isopropyltoluene	10.0	7.87	79	22	30	64-122	
sec-Butylbenzene	10.0	10.3	76	19	30	60-119	
Styrene	10.0	8.90	89	12	30	71-117	
tert-Butyl alcohol	200	142	71	9	30	70-130	
tert-Butylbenzene	10.0	8.38	81	20	30	61-119	
1,1,1,2-Tetrachloroethane	10.0	8.23	82	11	30	64-118	
1,1,2,2-Tetrachloroethane	10.0	8.86	89	14	30	63-122	
Tetrachloroethene	10.0	7.72	77	12	30	70-117	
Toluene	10.0	8.85	81	32	30	78-114	F
trans-1,2-Dichloroethene	10.0	8.24	82	9	30	80-119	
trans-1,3-Dichloropropene	10.0	8.32	83	5	30	46-116	
1,2,3-Trichlorobenzene	10.0	6.54	65	3	30	45-129	
1,2,4-Trichlorobenzene	10.0	7.40	74	7	30	38-138	
1,1,1-Trichloroethane	10.0	8.26	83	7	30	68-121	
Trichloroethene	10.0	8.57	86	6	30	66-120	
Trichlorofluoromethane	10.0	10.9	109	2	30	46-157	
1,2,3-Trichloropropane	10.0	11.8	118	2	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.4	114	0	30	70-152	
1,2,3-Trimethylbenzene	10.0	8.23	82	18	30	70-130	
1,2,4-Trimethylbenzene	10.0	8.13	81	19	30	67-124	
Vinyl acetate	10.0	9.13	91	3	30	43-157	
Vinyl chloride	10.0	9.13	91	5	30	49-130	
Xylenes, Total	30.0	25.6	85	12	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-050613	240-24060-1	84	85	89	90
MRC-OF-02C-050613	240-24060-2	90	87	88	92
MRC-OF-02B-050613	240-24060-3	84	84	89	91
MRC-OF-02A-050613	240-24060-4	84	81	89	91
MRC-MW-96D-050613	240-24060-5	88	86	88	88
	MB 240-86304/5	87	87	89	91
	LCS 240-86304/4	89	81	91	99
	240-24055-F-10 MS	84	80	91	102
	240-24055-H-10 MSD	87	85	94	98

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab File ID: BFB116C.D BFB Injection Date: 05/07/2013

Instrument ID: A3UX11 BFB Injection Time: 10:37

Analysis Batch No.: 84966

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	43.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	85.8	
175	5.0 - 9.0 % of mass 174	6.5	(7.5)1
176	95.0 - 101.0 % of mass 174	83.2	(97.0)1
177	5.0 - 9.0 % of mass 176	5.4	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-84966/2	UXJ1361.D	05/07/2013	11:08
	STD8260 240-84966/3	UXJ1362.D	05/07/2013	11:31
	STD8260 240-84966/4	UXJ1363.D	05/07/2013	11:53
	STD8260 240-84966/5	UXJ1364.D	05/07/2013	12:16
	STD8260 240-84966/6	UXJ1365.D	05/07/2013	12:39
	STD8260 240-84966/7	UXJ1366.D	05/07/2013	13:02
	STD6 240-84966/8	UXJ1367.D	05/07/2013	13:24
	STD5 240-84966/9	UXJ1368.D	05/07/2013	13:47
	STD4 240-84966/10	UXJ1369.D	05/07/2013	14:09
	STD3 240-84966/11	UXJ1370.D	05/07/2013	14:32
	STD2 240-84966/12	UXJ1371.D	05/07/2013	14:55
	STD1 240-84966/13	UXJ1372.D	05/07/2013	15:18
	ICV 240-84966/14	UXJ1373.D	05/07/2013	15:40

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-84966/7	UXJ1366.D
Level 2	STD8260 240-84966/6	UXJ1365.D
Level 3	STD8260 240-84966/5	UXJ1364.D
Level 4	STD8260 240-84966/4	UXJ1363.D
Level 5	STD8260 240-84966/3	UXJ1362.D
Level 6	STD8260 240-84966/2	UXJ1361.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1594 0.1602	0.1382	0.1559	0.1537	0.1575	Ave		0.1541				5.3		15.0			
Chloromethane	0.2084 0.1901	0.1850	0.2035	0.1951	0.1989	Ave		0.1968			0.1000	4.4		15.0			
Vinyl chloride	0.1998 0.1726	0.1747	0.1770	0.1846	0.1782	Ave		0.1812				5.5		15.0			
Bromomethane	0.0701 0.0811	0.0651	0.0745	0.0786	0.0793	Ave		0.0748				8.3		15.0			
Chloroethane	0.0841 0.0945	0.0773	0.0871	0.0914	0.0920	Ave		0.0878				7.2		15.0			
Trichlorofluoromethane	0.1798 0.2000	0.1574	0.1753	0.1796	0.1988	Ave		0.1818				8.7		15.0			
Acrolein	0.0279 0.0329	0.0281	0.0289	0.0298	0.0320	Ave		0.0300				7.0		15.0			
1,1-Dichloroethene	0.2134 0.1944	0.2010	0.1964	0.2093	0.2109	Ave		0.2042				3.9		15.0			
Acetone	0.0757 0.0416	0.0530	0.0428	0.0381	0.0419	Lin1	0.0578	0.0398							0.9960		0.9900
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.0776 0.1162	0.0881	0.0971	0.1008	0.1108	Ave		0.0984				14.0		15.0			
Iodomethane	0.3085 0.2333	0.2934	0.2759	0.2766	0.2610	Ave		0.2748				9.5		15.0			
Carbon disulfide	0.5679 0.5301	0.5621	0.5547	0.5565	0.5696	Ave		0.5568				2.6		15.0			
Acetonitrile	0.0110 0.0106	0.0085	0.0089	0.0103	0.0099	Ave		0.0099				10.0		15.0			
Methyl acetate	0.1466 0.1378	0.1468	0.1438	0.1345	0.1419	Ave		0.1419				3.5		15.0			
Methylene Chloride	0.4091 0.2347	0.3351	0.2678	0.2619	0.2445	Lin1	0.1891	0.2331							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0081 0.0080	0.0062	0.0070	0.0074	0.0086	Ave		0.0075				12.0		15.0			
Acrylonitrile	0.0710 0.0732	0.0656	0.0681	0.0651	0.0724	Ave		0.0692				5.0		15.0			
trans-1,2-Dichloroethene	0.3547 0.3309	0.3417	0.3402	0.3473	0.3398	Ave		0.3424				2.3		15.0			
Methyl tert-butyl ether	0.7064 0.7026	0.6872	0.6976	0.6815	0.7294	Ave		0.7008				2.4		15.0			
Hexane	0.0578 0.0693	0.0648	0.0554	0.0622	0.0652	Ave		0.0625				8.2		15.0			
1,1-Dichloroethane	0.5417 0.5102	0.5279	0.5289	0.5417	0.5349	Ave		0.5309			0.1000	2.2		15.0			
Vinyl acetate	0.0464 0.0630	0.0502	0.0632	0.0618	0.0652	Ave		0.0583				14.0		15.0			
cis-1,2-Dichloroethene	0.3444 0.3515	0.3369	0.3527	0.3561	0.3567	Ave		0.3497				2.2		15.0			
2-Butanone	0.0766 0.0682	0.0703	0.0670	0.0642	0.0734	Ave		0.0699				6.4		15.0			
2,2-Dichloropropane	0.2813 0.2229	0.2664	0.2506	0.2527	0.2487	Ave		0.2538				7.7		15.0			
Bromochloromethane	0.1727 0.1665	0.1705	0.1698	0.1762	0.1693	Ave		0.1708				1.9		15.0			
Tetrahydrofuran	0.0433 0.0462	0.0454	0.0457	0.0427	0.0487	Ave		0.0453				4.7		15.0			
Chloroform	0.5802 0.5137	0.5328	0.5221	0.5324	0.5277	Ave		0.5348				4.4		15.0			
1,1,1-Trichloroethane	0.3414 0.3292	0.3788	0.3628	0.3707	0.3751	Ave		0.3597				5.6		15.0			
Cyclohexane	0.2947 0.3499	0.3345	0.3206	0.3524	0.3596	Ave		0.3353				7.3		15.0			
1,1-Dichloropropene	0.4105 0.4122	0.4054	0.4051	0.4307	0.4201	Ave		0.4140				2.4		15.0			
Carbon tetrachloride	0.3227 0.3117	0.3226	0.3234	0.3348	0.3379	Ave		0.3255				2.9		15.0			
1,2-Dichloroethane	0.3466 0.3333	0.3489	0.3388	0.3453	0.3503	Ave		0.3439				1.9		15.0			
Benzene	1.3663 1.3032	1.3137	1.3101	1.3380	1.3319	Ave		1.3272				1.8		15.0			
Trichloroethene	0.3613 0.3346	0.3495	0.3356	0.3442	0.3503	Ave		0.3459				2.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3209 0.3941	0.3586	0.3555	0.3742	0.3821	Ave		0.3642				7.0		15.0			
1,2-Dichloropropane	0.3115 0.2872	0.2878	0.2983	0.2959	0.2965	Ave		0.2962				3.0		15.0			
Dibromomethane	0.1538 0.1566	0.1554	0.1624	0.1591	0.1672	Ave		0.1591				3.1		15.0			
1,4-Dioxane	0.0003 0.0010	0.0006	0.0005	0.0009	0.0011	Qua	-0.088	0.0012	X 0						0.9950		0.9900
Bromodichloromethane	0.3746 0.3652	0.3424	0.3555	0.3716	0.3782	Ave		0.3646				3.7		15.0			
2-Chloroethyl vinyl ether	0.1418 0.1511	0.1451	0.1495	0.1509	0.1586	Ave		0.1495				3.9		15.0			
cis-1,3-Dichloropropene	0.4421 0.4530	0.3992	0.4302	0.4529	0.4664	Ave		0.4406				5.4		15.0			
4-Methyl-2-pentanone	0.1248 0.1377	0.1501	0.1445	0.1392	0.1492	Ave		0.1409				6.6		15.0			
Toluene	2.3527 2.3846	2.2832	2.2039	2.3199	2.3763	Ave		2.3201				2.9		15.0			
trans-1,3-Dichloropropene	0.5628 0.6519	0.5152	0.5832	0.6114	0.6425	Ave		0.5945				8.7		15.0			
Ethyl methacrylate	0.5059 0.5423	0.4635	0.4659	0.5103	0.5586	Ave		0.5077				7.6		15.0			
1,1,2-Trichloroethane	0.4308 0.3800	0.3729	0.3908	0.3744	0.3876	Ave		0.3894				5.5		15.0			
1,3-Dichloropropane	0.6847 0.6793	0.6632	0.6831	0.6615	0.7060	Ave		0.6796				2.4		15.0			
Tetrachloroethene	0.4364 0.4124	0.3930	0.4045	0.4251	0.4178	Ave		0.4149				3.7		15.0			
2-Hexanone	0.1245 0.1367	0.1252	0.1327	0.1336	0.1451	Ave		0.1330				5.8		15.0			
Dibromochloromethane	0.3751 0.4113	0.3616	0.3714	0.3891	0.4155	Ave		0.3873				5.7		15.0			
1,2-Dibromoethane	0.3574 0.3461	0.3364	0.3500	0.3368	0.3641	Ave		0.3484				3.2		15.0			
Chlorobenzene	1.2018 1.1290	1.1570	1.1160	1.1577	1.1616	Ave		1.1539			0.3000	2.6		15.0			
1,1,1,2-Tetrachloroethane	0.3714 0.3729	0.3983	0.3665	0.3841	0.3897	Ave		0.3805				3.2		15.0			
Ethylbenzene	0.6063 0.5970	0.5723	0.6055	0.6078	0.6221	Ave		0.6018				2.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.7095 0.6962	0.6637	0.7011	0.7196	0.7145	Ave		0.7008				2.9		15.0			
o-Xylene	0.5717 0.5696	0.5580	0.5798	0.6022	0.5956	Ave		0.5795				2.9		15.0			
Styrene	0.8873 0.9777	0.8906	0.9138	1.0014	0.9946	Ave		0.9442				5.6		15.0			
Bromoform	0.1540 0.1592	0.1371	0.1517	0.1455	0.1624	Ave		0.1517			0.1000	6.1		15.0			
Isopropylbenzene	1.2008 1.1945	1.2329	1.2417	1.2516	1.2545	Ave		1.2293				2.1		15.0			
1,1,2,2-Tetrachloroethane	0.8210 0.6824	0.7953	0.7750	0.7286	0.7553	Ave		0.7596			0.3000	6.5		15.0			
Bromobenzene	0.9775 0.9126	0.9925	0.9681	0.9698	0.9573	Ave		0.9629				2.8		15.0			
1,2,3-Trichloropropane	0.2273 0.2187	0.2627	0.2438	0.2307	0.2327	Ave		0.2360				6.5		15.0			
trans-1,4-Dichloro-2-butene	0.1251 0.1602	0.0998	0.1146	0.1231	0.1469	Lin1	-0.080	0.1533							0.9900		0.9900
n-Propylbenzene	0.8717 0.8621	0.9261	0.9105	0.8937	0.8835	Ave		0.8913				2.7		15.0			
2-Chlorotoluene	0.7445 0.7911	0.8189	0.8574	0.8029	0.8252	Ave		0.8067				4.7		15.0			
1,3,5-Trimethylbenzene	2.2090 2.4156	2.3590	2.3941	2.4473	2.4416	Ave		2.3778				3.7		15.0			
4-Chlorotoluene	0.8727 0.8653	0.8480	0.8323	0.8504	0.8523	Ave		0.8535				1.7		15.0			
tert-Butylbenzene	1.9177 1.9040	1.9276	1.9642	2.0063	1.9720	Ave		1.9486				2.0		15.0			
1,2,4-Trimethylbenzene	2.0676 2.5147	2.3612	2.4648	2.4931	2.5213	Ave		2.4038				7.3		15.0			
sec-Butylbenzene	2.5956 2.6889	2.6429	2.6989	2.7630	2.6956	Ave		2.6808				2.1		15.0			
1,3-Dichlorobenzene	1.6779 1.5722	1.7106	1.6595	1.5951	1.5965	Ave		1.6353				3.4		15.0			
p-Isopropyltoluene	2.0328 2.3657	2.1283	2.2254	2.3675	2.3779	Ave		2.2496				6.5		15.0			
1,4-Dichlorobenzene	1.8517 1.6012	1.6914	1.7081	1.6602	1.6539	Ave		1.6944				5.0		15.0			
n-Butylbenzene	1.9209 2.0336	1.8826	1.9205	1.9816	2.0254	Ave		1.9607				3.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 11:08 Calibration End Date: 05/07/2013 13:02 Calibration ID: 15041

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.6836 1.4030	1.5884	1.6015	1.5413	1.5206	Ave		1.5564				6.0		15.0			
1,2-Dibromo-3-Chloropropane	0.1128 0.0908	0.1357	0.1313	0.1164	0.1219	Ave		0.1181				14.0		15.0			
1,3,5-Trichlorobenzene	1.1052 0.7377	0.9154	1.0056	0.8781	0.8666	Ave		0.9181				14.0		15.0			
1,2,4-Trichlorobenzene	0.9492 0.5449	0.8060	0.7680	0.7215	0.6898	Qua	0.0034	0.8134	-0.007						1.0000		0.9900
Hexachlorobutadiene	0.4030 0.2205	0.3998	0.3727	0.3439	0.2850	Qua	0.1310	0.3514	-0.003						0.9990		0.9900
Naphthalene	1.9695 0.9187	1.9413	1.8223	1.6812	1.5463	Qua	-0.506	2.1299	-0.030						0.9980		0.9900
1,2,3-Trichlorobenzene	0.7440 0.3425	0.8069	0.7154	0.6312	0.5615	Qua	0.0096	0.7620	-0.010						0.9990		0.9900
Dibromofluoromethane (Surr)	0.3045 0.2775	0.2562	0.3032	0.2901	0.2781	Ave		0.2849				6.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3130 0.2726	0.2793	0.3123	0.2975	0.2759	Ave		0.2918				6.3		15.0			
Toluene-d8 (Surr)	1.9011 1.9630	1.7705	1.9081	1.9229	1.9086	Ave		1.8957				3.4		15.0			
4-Bromofluorobenzene (Surr)	0.3320 0.3286	0.3113	0.3348	0.3324	0.3316	Ave		0.3284				2.6		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84966/13	UXJ1372.D
Level 2	STD2 240-84966/12	UXJ1371.D
Level 3	STD3 240-84966/11	UXJ1370.D
Level 4	STD4 240-84966/10	UXJ1369.D
Level 5	STD5 240-84966/9	UXJ1368.D
Level 6	STD6 240-84966/8	UXJ1367.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.2557 0.2421	0.2640	0.2436	0.2356	0.2527	Ave		0.2489				4.2		15.0			
Ethyl ether	0.2294 0.2336	0.2232	0.2405	0.2202	0.2323	Ave		0.2299				3.2		15.0			
3-Chloro-1-propene	0.1274 0.1699	0.1362	0.1536	0.1503	0.1672	Ave		0.1508				11.0		15.0			
Diisopropyl ether	0.2584 0.2886	0.2793	0.2775	0.2562	0.2878	Ave		0.2747				5.2		15.0			
2-Chloro-1,3-butadiene	0.3879 0.4311	0.4213	0.4144	0.4215	0.4360	Ave		0.4187				4.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.7067 0.7677	0.7770	0.7592	0.6807	0.7541	Ave		0.7409				5.2		15.0			
Propionitrile	0.0136 0.0182	0.0216	0.0151	0.0175	0.0170	Lin1	-0.004	0.0178	X						0.9950		0.9900
Ethyl acetate	0.1859 0.1658	0.1958	0.1667	0.1702	0.1583	Ave		0.1738				8.1		15.0			
Methacrylonitrile	0.1094 0.1081	0.1182	0.1115	0.1131	0.1094	Ave		0.1116				3.3		15.0			
Isobutyl alcohol	0.0045 0.0034	0.0051	0.0032	0.0039	0.0039	Qua	-0.020	0.0044	X 0						0.9980		0.9900
Tert-amyl-methyl ether (TAME)	0.6654 0.7215	0.6927	0.6904	0.6212	0.6894	Ave		0.6801				5.0		15.0			
n-Heptane	0.0524 0.0607	0.0477	0.0574	0.0816	0.0618	Qua	-0.022	0.0728	0						0.9930		0.9900
n-Butanol	0.0036 0.0036	0.0039	0.0034	0.0036	0.0031	Ave		0.0035	X			8.0		15.0			
Methyl methacrylate	0.1436 0.1616	0.1494	0.1536	0.1493	0.1580	Ave		0.1526				4.3		15.0			
2-Nitropropane	0.0371 0.0358	0.0403	0.0321	0.0343	0.0331	Ave		0.0355	X			8.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84966

SDG No.:

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/07/2013 13:24 Calibration End Date: 05/07/2013 15:18 Calibration ID: 15043

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0661 0.0747	0.0849	0.0713	0.0708	0.0722	Ave		0.0733				8.6		15.0			
1,2,3-Trimethylbenzene	2.3146 2.7560	2.3139	2.2741	2.3695	2.6939	Ave		2.4537				8.7		15.0			
2-Methylnaphthalene	0.9245 0.2001	1.0409	0.7310	0.5723	0.4750	Qua	0.8511	0.6950	-0.006						0.9940		0.9900
n-Butyl acetate	0.1905 0.2249	0.1995	0.1965	0.2017	0.2071	Ave		0.2034				5.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab File ID: BFB126.D BFB Injection Date: 05/17/2013

Instrument ID: A3UX11 BFB Injection Time: 08:17

Analysis Batch No.: 86304

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.4	
75	30.0 - 60.0 % of mass 95	44.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.2	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	81.5	
175	5.0 - 9.0 % of mass 174	6.4	(7.8)1
176	95.0 - 101.0 % of mass 174	79.9	(98.0)1
177	5.0 - 9.0 % of mass 176	4.5	(5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-86304/2	UXJ1676.D	05/17/2013	08:47
	CCV 240-86304/3	UXJ1677.D	05/17/2013	09:10
	LCS 240-86304/4	UXJ1680.D	05/17/2013	10:17
	MB 240-86304/5	UXJ1682.D	05/17/2013	11:02
	240-24055-F-10 MS	UXJ1688.D	05/17/2013	13:18
	240-24055-H-10 MSD	UXJ1689.D	05/17/2013	13:41
TB-050613	240-24060-1	UXJ1696.D	05/17/2013	16:20
MRC-OF-02C-050613	240-24060-2	UXJ1697.D	05/17/2013	16:43
MRC-OF-02B-050613	240-24060-3	UXJ1698.D	05/17/2013	17:05
MRC-OF-02A-050613	240-24060-4	UXJ1699.D	05/17/2013	17:28
MRC-MW-96D-050613	240-24060-5	UXJ1700.D	05/17/2013	17:51

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab Sample ID: CCVIS 240-86304/2 Calibration Date: 05/17/2013 08:47

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1676.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1541	0.1840		1.00	0.0100	19.3	50.0
Chloromethane	Ave	0.1968	0.1851	0.1000	1.00	0.0100	-6.0	50.0
Vinyl chloride	Ave	0.1812	0.1910		1.00	0.0100	5.4	20.0
Bromomethane	Ave	0.0748	0.0844		1.00	0.0100	12.9	50.0
Chloroethane	Ave	0.0878	0.1018		1.00	0.0100	15.9	50.0
Trichlorofluoromethane	Ave	0.1818	0.2049		1.00	0.0100	12.7	50.0
Acrolein	Ave	0.0300	0.0254		20.0	0.100	-15.2	50.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.0984	0.1069		1.00	0.0100	8.6	50.0
1,1-Dichloroethene	Ave	0.2042	0.1853		1.00	0.0100	-9.3	20.0
Acetone	Lin1		0.0305		10.0	0.0200	-30.5	50.0
Iodomethane	Ave	0.2748	0.1992		1.00	0.0100	-27.5	50.0
Carbon disulfide	Ave	0.5568	0.5261		1.00	0.0100	-5.5	50.0
Acetonitrile	Ave	0.0099	0.0101		20.0	0.100	1.9	50.0
Methyl acetate	Ave	0.1419	0.1418		10.0	0.0200	-0.1	50.0
Methylene Chloride	Lin1		0.2151		1.00	0.0100	-15.8	50.0
tert-Butyl alcohol	Ave	0.0075	0.0047		50.0	0.200	-37.8	50.0
Acrylonitrile	Ave	0.0692	0.0706		20.0	0.0200	2.0	50.0
trans-1,2-Dichloroethene	Ave	0.3424	0.2986		1.00	0.0100	-12.8	50.0
Methyl tert-butyl ether	Ave	0.7008	0.5807		1.00	0.0100	-17.1	50.0
Hexane	Ave	0.0625	0.0711		1.00	0.0100	13.9	20.0
1,1-Dichloroethane	Ave	0.5309	0.4846	0.1000	1.00	0.0100	-8.7	50.0
Vinyl acetate	Ave	0.0583	0.0561		2.00	0.0100	-3.7	50.0
cis-1,2-Dichloroethene	Ave	0.3497	0.3049		1.00	0.0100	-12.8	50.0
2,2-Dichloropropane	Ave	0.2538	0.2075		1.00	0.0100	-18.2	50.0
2-Butanone	Ave	0.0699	0.0578		10.0	0.0200	-17.4	50.0
Bromochloromethane	Ave	0.1708	0.1502		1.00	0.0100	-12.1	50.0
Tetrahydrofuran	Ave	0.0453	0.0373		5.00	0.0100	-17.7	50.0
Chloroform	Ave	0.5348	0.4773		1.00	0.0100	-10.8	20.0
1,1,1-Trichloroethane	Ave	0.3597	0.3069		1.00	0.0100	-14.7	50.0
Cyclohexane	Ave	0.3353	0.3531		1.00	0.0100	5.3	50.0
1,1-Dichloropropene	Ave	0.4140	0.3833		1.00	0.0100	-7.4	50.0
Carbon tetrachloride	Ave	0.3255	0.2902		1.00	0.0100	-10.8	50.0
1,2-Dichloroethane	Ave	0.3439	0.3110		1.00	0.0100	-9.5	50.0
Benzene	Ave	1.327	1.183		1.00	0.0100	-10.9	50.0
Trichloroethene	Ave	0.3459	0.3033		1.00	0.0100	-12.3	50.0
Methylcyclohexane	Ave	0.3642	0.3945		1.00	0.0100	8.3	50.0
1,2-Dichloropropane	Ave	0.2962	0.2722		1.00	0.0100	-8.1	20.0
Dibromomethane	Ave	0.1591	0.1457		1.00	0.0100	-8.4	50.0
1,4-Dioxane	Qua		0.0007		50.0	0.500	-27.9	50.0
Bromodichloromethane	Ave	0.3646	0.3316		1.00	0.0100	-9.0	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab Sample ID: CCVIS 240-86304/2 Calibration Date: 05/17/2013 08:47

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1676.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1495	0.1403		10.0	0.0200	-6.2	50.0
cis-1,3-Dichloropropene	Ave	0.4406	0.3917		1.00	0.0100	-11.1	50.0
4-Methyl-2-pentanone	Ave	0.1409	0.1312		10.0	0.0200	-6.9	50.0
Toluene	Ave	2.320	2.131		1.00	0.0100	-8.1	20.0
trans-1,3-Dichloropropene	Ave	0.5945	0.5445		1.00	0.0100	-8.4	50.0
Ethyl methacrylate	Ave	0.5077	0.4663		1.00	0.0100	-8.2	50.0
1,1,2-Trichloroethane	Ave	0.3894	0.3688		1.00	0.0100	-5.3	50.0
1,3-Dichloropropane	Ave	0.6796	0.6223		1.00	0.0100	-8.4	50.0
Tetrachloroethene	Ave	0.4149	0.3856		1.00	0.0100	-7.1	50.0
2-Hexanone	Ave	0.1330	0.1184		10.0	0.0200	-11.0	50.0
Dibromochloromethane	Ave	0.3873	0.3522		1.00	0.0100	-9.1	50.0
1,2-Dibromoethane	Ave	0.3484	0.3138		1.00	0.0100	-9.9	50.0
Chlorobenzene	Ave	1.154	1.067	0.3000	1.00	0.0100	-7.6	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3805	0.3681		1.00	0.0100	-3.3	50.0
Ethylbenzene	Ave	0.6018	0.5621		1.00	0.0100	-6.6	20.0
m-Xylene & p-Xylene	Ave	0.7008	0.6644		2.00	0.0200	-5.2	50.0
o-Xylene	Ave	0.5795	0.5537		1.00	0.0100	-4.5	50.0
Styrene	Ave	0.9442	0.9302		1.00	0.0100	-1.5	50.0
Bromoform	Ave	0.1517	0.1446	0.1000	1.00	0.0100	-4.7	50.0
Isopropylbenzene	Ave	1.229	1.202		1.00	0.0100	-2.2	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7596	0.7202	0.3000	1.00	0.0100	-5.2	50.0
Bromobenzene	Ave	0.9629	0.8960		1.00	0.0100	-7.0	50.0
1,2,3-Trichloropropane	Ave	0.2360	0.2151		1.00	0.0100	-8.8	50.0
trans-1,4-Dichloro-2-butene	Lin1		0.1197		1.00	0.0100	-16.7	50.0
n-Propylbenzene	Ave	0.8913	0.8476		1.00	0.0100	-4.9	50.0
2-Chlorotoluene	Ave	0.8067	0.7484		1.00	0.0100	-7.2	50.0
1,3,5-Trimethylbenzene	Ave	2.378	2.297		1.00	0.0100	-3.4	50.0
4-Chlorotoluene	Ave	0.8535	0.8072		1.00	0.0100	-5.4	50.0
tert-Butylbenzene	Ave	1.949	1.799		1.00	0.0100	-7.7	50.0
1,2,4-Trimethylbenzene	Ave	2.404	2.332		1.00	0.0100	-3.0	50.0
sec-Butylbenzene	Ave	2.681	2.634		1.00	0.0100	-1.8	50.0
1,3-Dichlorobenzene	Ave	1.635	1.456		1.00	0.0100	-10.9	50.0
p-Isopropyltoluene	Ave	2.250	2.213		1.00	0.0100	-1.6	50.0
1,4-Dichlorobenzene	Ave	1.694	1.551		1.00	0.0100	-8.5	50.0
n-Butylbenzene	Ave	1.961	1.906		1.00	0.0100	-2.8	50.0
1,2-Dichlorobenzene	Ave	1.556	1.413		1.00	0.0100	-9.2	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1181	0.0935		2.00	0.0100	-20.8	50.0
1,3,5-Trichlorobenzene	Ave	0.9181	0.7985		1.00	0.0100	-13.0	50.0
1,2,4-Trichlorobenzene	Qua		0.5653		1.00	0.0100	-26.0	50.0
Hexachlorobutadiene	Qua		0.2780		1.00	0.0100	-18.2	50.0
Naphthalene	Qua		0.9524		1.00	0.0100	-49.5	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab Sample ID: CCVIS 240-86304/2 Calibration Date: 05/17/2013 08:47

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 11:08

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 13:02

Lab File ID: UXJ1676.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Qua		0.4039		1.00	0.0100	-42.6	50.0
Dibromofluoromethane (Surr)	Ave	0.2849	0.2458		0.00719	0.00834	-13.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2918	0.2426		0.00693	0.00834	-16.8	50.0
Toluene-d8 (Surr)	Ave	1.896	1.751		0.00770	0.00834	-7.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.3284	0.3222		0.00818	0.00834	-1.9	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab Sample ID: CCV 240-86304/3 Calibration Date: 05/17/2013 09:10

Instrument ID: A3UX11 Calib Start Date: 05/07/2013 13:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/07/2013 15:18

Lab File ID: UXJ1677.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.2489	0.2692		2.00	0.0100	8.1	50.0
Ethyl ether	Ave	0.2299	0.2285		2.00	0.0100	-0.6	50.0
3-Chloro-1-propene	Ave	0.1508	0.1521		2.00	0.0100	0.9	50.0
Diisopropyl ether	Ave	0.2747	0.2519		10.0	0.0500	-8.3	50.0
2-Chloro-1,3-butadiene	Ave	0.4187	0.4100		2.00	0.0100	-2.1	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7409	0.6806		5.00	0.0100	-8.1	50.0
Ethyl acetate	Ave	0.1738	0.1694		4.00	0.0200	-2.5	50.0
Propionitrile	Lin1		0.0199		4.00	0.0200	12.9	50.0
Methacrylonitrile	Ave	0.1116	0.1165		2.00	0.0100	4.4	50.0
Isobutyl alcohol	Qua		0.0048		50.0	0.200	20.4	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.6801	0.6121		5.00	0.0100	-10.0	50.0
n-Heptane	Qua		0.0776		1.00	0.0100	15.0	50.0
n-Butanol	Ave	0.0035	0.0032		50.0	0.200	-9.0	50.0
Methyl methacrylate	Ave	0.1526	0.1470		2.00	0.0100	-3.7	50.0
2-Nitropropane	Ave	0.0355	0.0376		2.00	0.0200	6.1	50.0
Cyclohexanone	Ave	0.0733	0.0668		20.0	0.100	-9.0	50.0
1,2,3-Trimethylbenzene	Ave	2.454	2.324		0.00947	0.0100	-5.3	50.0
2-Methylnaphthalene	Qua		0.1114		5.00	0.0200	-89.9*	50.0

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Sample No.: STD8260 240-84966/4 Date Analyzed: 05/07/2013 11:53

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ1363.D Heated Purge: (Y/N) N

Calibration ID: 15041

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1341609	5.10	790643	7.77	258451	10.00
UPPER LIMIT		2683218	5.60	1581286	8.27	516902	10.50
LOWER LIMIT		670805	4.60	395322	7.27	129226	9.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVIS 240-86304/2		1452900	5.10	814917	7.77	266013	10.00

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Sample No.: CCVIS 240-86304/2 Date Analyzed: 05/17/2013 08:47

Instrument ID: A3UX11 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXJ1676.D Heated Purge: (Y/N) N

Calibration ID: 15043

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1452900	5.10	814917	7.77	266013	10.00
UPPER LIMIT		2905800	5.60	1629834	8.27	532026	10.50
LOWER LIMIT		726450	4.60	407459	7.27	133007	9.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-86304/3		1462117	5.10	772620	7.77	227703	10.00
LCS 240-86304/4		1367205	5.10	799929	7.77	270019	10.00
MB 240-86304/5		1316221	5.10	756893	7.77	235532	10.00
240-24055-F-10 MS		1355848	5.10	823436	7.77	247126	10.00
240-24055-H-10 MSD		1385488	5.10	827538	7.77	278924	10.00
240-24060-1	TB-050613	1308467	5.10	753887	7.77	222094	10.00
240-24060-2	MRC-OF-02C-050613	1268954	5.10	752672	7.77	207770	10.00
240-24060-3	MRC-OF-02B-050613	1276961	5.10	741982	7.77	205304	10.00
240-24060-4	MRC-OF-02A-050613	1314812	5.10	753986	7.77	222471	10.00
240-24060-5	MRC-MW-96D-050613	1262634	5.10	752484	7.77	199411	10.00

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab File ID: 30516004.D Lab Sample ID: MB 240-85576/21-A

Matrix: Water Date Extracted: 05/12/2013 11:25

Instrument ID: A4HP7 Date Analyzed: 05/16/2013 10:25

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-85576/22-A	30516005.D	05/16/2013 10:52
MRC-OF-02B-050613	240-24060-3	30516011.D	05/16/2013 13:33
MRC-OF-02C-050613	240-24060-2	30516012.D	05/16/2013 14:00
MRC-MW-96D-050613	240-24060-5	30516013.D	05/16/2013 14:26
MRC-OF-02A-050613	240-24060-4	30516014.D	05/16/2013 14:53

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-24060-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-85576/21-A

Matrix: Water | Lab File ID: 30516004.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/12/2013 11:25

Sample wt/vol: 1000(mL) | Date Analyzed: 05/16/2013 10:25

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 86134 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	68		20-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	75		21-110
4165-60-0	Nitrobenzene-d5 (Surr)	66		21-110
4165-62-2	Phenol-d5 (Surr)	68		21-110
1718-51-0	Terphenyl-d14 (Surr)	53		24-110

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 30516005.D

Lab ID: LCS 240-85576/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	15.2	76	27-110	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-OF-02C-050613	240-24060-2	66	67	65	67	81	55
MRC-OF-02B-050613	240-24060-3	52	53	51	54	69	41
MRC-OF-02A-050613	240-24060-4	69	70	66	67	81	57
MRC-MW-96D-050613	240-24060-5	72	74	70	74	83	57
	MB 240-85576/21-A	66	68	66	68	75	53
	LCS 240-85576/22-A	86	87	88	86	94	61

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	21-110
NBZ = Nitrobenzene-d5 (Surr)	21-110
FBP = 2-Fluorobiphenyl (Surr)	20-110
TBP = 2,4,6-Tribromophenol (Surr)	21-110
TPH = Terphenyl-d14 (Surr)	24-110

Column to be used to flag recovery values

FORM II 8270D

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab File ID: 30501001.D DFTPP Injection Date: 05/01/2013

Instrument ID: A4HP7 DFTPP Injection Time: 14:06

Analysis Batch No.: 84325

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.7	
68	Less than 2.0% of mass 69	0.5	(1.2)1
69	Mass 69 relative abundance	44.4	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	49.6	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	21.1	
365	Greater than 0.75% of mass 198	2.3	
441	Present, but less than mass 443	8.8	
442	40.0 - 110.0% of mass 198	60.6	
443	15.0 - 24.0% of mass 442	10.7	(17.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-84325/2	30501002.D	05/01/2013	14:33
	STD4 240-84325/3	30501003.D	05/01/2013	14:59
	STD3 240-84325/4	30501004.D	05/01/2013	15:26
	STD2 240-84325/5	30501005.D	05/01/2013	15:53
	STD1 240-84325/6	30501006.D	05/01/2013	16:20
	STD9 240-84325/7	30501007.D	05/01/2013	16:46
	STD8 240-84325/8	30501008.D	05/01/2013	17:13
	STD7 240-84325/9	30501009.D	05/01/2013	17:40
	STD6 240-84325/10	30501010.D	05/01/2013	18:07
	ICV 240-84325/11	30501011.D	05/01/2013	18:33

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-24060-1 Analy Batch No.: 84325

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/01/2013 14:33 Calibration End Date: 05/01/2013 18:07 Calibration ID: 14918

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-84325/6	30501006.D
Level 2	STD2 240-84325/5	30501005.D
Level 3	STD3 240-84325/4	30501004.D
Level 4	STD4 240-84325/3	30501003.D
Level 5	STD5 240-84325/2	30501002.D
Level 6	STD6 240-84325/10	30501010.D
Level 7	STD7 240-84325/9	30501009.D
Level 8	STD8 240-84325/8	30501008.D
Level 9	STD9 240-84325/7	30501007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5318	0.5880 0.5394	0.5502 0.5872	0.5213 0.6030	0.5091	Ave		0.5537				6.3		20.0			
N-Nitrosodimethylamine	0.8974	0.7477 0.8955	0.8230 0.9781	0.7926 0.9669	0.8457	Ave		0.8684				9.4		20.0			
Pyridine	1.5582	1.2634 1.5762	1.3399 1.7197	1.4644 1.6674	1.5202	Ave		1.5137				10.0		20.0			
Benzaldehyde	1.4895 1.2675	1.2612 1.2301	1.3552 1.2759	1.3323 1.1304	1.3015	Ave		1.2937			0.0100	7.6		20.0			
Phenol	1.7394	1.7499 1.7086	1.7851 1.8067	1.7667 1.7363	1.7409	Ave		1.7542			0.8000	1.8		20.0			
Aniline	2.4199	2.1443 2.3565	2.3268 2.5465	2.2548 2.4320	2.3549	Ave		2.3545				5.1		20.0			
Bis(2-chloroethyl)ether	1.6038	1.6483 1.5942	1.6778 1.7553	1.6672 1.7548	1.5815	Ave		1.6604			0.7000	4.1		20.0			
2-Chlorophenol	1.2693	1.2476 1.2526	1.2750 1.3393	1.2542 1.2736	1.2636	Ave		1.2719			0.8000	2.3		20.0			
1,3-Dichlorobenzene	1.3588	1.2946 1.3579	1.3612 1.4513	1.3381 1.3992	1.3351	Ave		1.3620				3.4		20.0			
1,4-Dichlorobenzene	1.3845	1.3527 1.3857	1.3862 1.4786	1.3845 1.4417	1.3680	Ave		1.3977				3.0		20.0			
Benzyl alcohol	0.9046	0.8257 0.8890	0.8835 0.9581	0.8718 0.9449	0.8925	Ave		0.8963				4.6		20.0			
1,2-Dichlorobenzene	1.2789	1.2615 1.2721	1.3209 1.3601	1.2852 1.3047	1.2931	Ave		1.2971				2.4		20.0			
2-Methylphenol	1.2158	1.2003 1.2060	1.2565 1.2761	1.2167 1.2424	1.2371	Ave		1.2314			0.7000	2.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab Sample ID: ICV 240-84325/11 Calibration Date: 05/01/2013 18:33

Instrument ID: A4HP7 Calib Start Date: 05/01/2013 14:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/01/2013 18:07

Lab File ID: 30501011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5537	0.5433		9.81	10.0	-1.9	30.0
N-Nitrosodimethylamine	Ave	0.8684	0.8673		9.99	10.0	-0.1	30.0
Pyridine	Ave	1.514	1.644		10.9	10.0	8.6	30.0
Benzaldehyde	Ave	1.294	1.287	0.0100	19.9	20.0	-0.5	30.0
Phenol	Ave	1.754	1.749	0.8000	9.97	10.0	-0.3	30.0
Aniline	Ave	2.354	2.399		10.2	10.0	1.9	30.0
Bis(2-chloroethyl)ether	Ave	1.660	1.578	0.7000	9.50	10.0	-5.0	30.0
2-Chlorophenol	Ave	1.272	1.270	0.8000	9.98	10.0	-0.2	30.0
1,3-Dichlorobenzene	Ave	1.362	1.344		9.87	10.0	-1.3	30.0
1,4-Dichlorobenzene	Ave	1.398	1.387		9.92	10.0	-0.8	30.0
Benzyl alcohol	Ave	0.8963	0.9100		10.2	10.0	1.5	30.0
1,2-Dichlorobenzene	Ave	1.297	1.278		9.86	10.0	-1.4	30.0
2-Methylphenol	Ave	1.231	1.231	0.7000	10.0	10.0	-0.0	30.0
bis (2-chloroisopropyl) ether	Ave	2.576	2.776		7.76	7.20	7.8	30.0
Indene	Ave	2.322	2.374		20.4	20.0	2.2	30.0
3 & 4 Methylphenol	Ave	1.293	1.309		10.1	10.0	1.2	30.0
N-Nitrosodi-n-propylamine	Ave	1.021	1.015	0.5000	9.93	10.0	-0.7	30.0
Acetophenone	Ave	1.994	1.971	0.0100	9.88	10.0	-1.2	30.0
Hexachloroethane	Ave	0.5644	0.5622	0.3000	9.96	10.0	-0.4	30.0
Nitrobenzene	Ave	0.4059	0.4147	0.2000	10.2	10.0	2.2	30.0
Isophorone	Ave	0.6969	0.7346	0.4000	10.5	10.0	5.4	30.0
2,4-Dimethylphenol	Ave	0.3146	0.3051	0.2000	9.70	10.0	-3.0	30.0
2-Nitrophenol	Ave	0.1556	0.1591	0.1000	10.2	10.0	2.3	30.0
Benzoic acid	Lin1		0.1905		20.8	20.0	4.2	30.0
Bis(2-chloroethoxy)methane	Ave	0.4240	0.4153	0.3000	9.79	10.0	-2.1	30.0
2,4-Dichlorophenol	Ave	0.2544	0.2539	0.2000	9.98	10.0	-0.2	30.0
1,2,4-Trichlorobenzene	Ave	0.2609	0.2629		10.1	10.0	0.8	30.0
Naphthalene	Ave	0.9392	0.9527	0.7000	10.1	10.0	1.4	30.0
4-Chloroaniline	Ave	0.4242	0.4183	0.0100	9.86	10.0	-1.4	30.0
Hexachlorobutadiene	Ave	0.1452	0.1458	0.0100	10.0	10.0	0.4	30.0
Caprolactam	Ave	0.0932	0.0991	0.0100	21.3	20.0	6.4	30.0
4-Chloro-3-methylphenol	Ave	0.2794	0.2880	0.2000	10.3	10.0	3.1	30.0
2-Methylnaphthalene	Ave	0.6254	0.5995	0.4000	9.58	10.0	-4.2	30.0
1-Methylnaphthalene	Ave	0.5802	0.5652		9.74	10.0	-2.6	30.0
Hexachlorocyclopentadiene	Ave	0.2612	0.2712	0.0500	10.4	10.0	3.8	30.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4338	0.4451	0.0100	10.3	10.0	2.6	30.0
2,4,6-Trichlorophenol	Ave	0.3001	0.3093	0.2000	10.3	10.0	3.1	30.0
2,4,5-Trichlorophenol	Ave	0.3117	0.3255	0.2000	10.4	10.0	4.4	30.0
1,1'-Biphenyl	Ave	1.255	1.268	0.0100	10.1	10.0	1.0	30.0
2-Chloronaphthalene	Ave	0.9786	0.9929	0.8000	10.1	10.0	1.5	30.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab File ID: 30516001.D DFTPP Injection Date: 05/16/2013

Instrument ID: A4HP7 DFTPP Injection Time: 09:10

Analysis Batch No.: 86134

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	49.9	
68	Less than 2.0% of mass 69	0.6	(1.5)1
69	Mass 69 relative abundance	43.6	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	48.7	
197	Less than 1.0% of mass 198	0.3	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.2	
275	10.0- 30.0% of mass 198	21.7	
365	Greater than 0.75% of mass 198	2.4	
441	Present, but less than mass 443	8.7	
442	40.0 - 110.0% of mass 198	63.0	
443	15.0 - 24.0% of mass 442	10.3	(16.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-86134/2	30516002.D	05/16/2013	09:32
	MB 240-85576/21-A	30516004.D	05/16/2013	10:25
	LCS 240-85576/22-A	30516005.D	05/16/2013	10:52
MRC-OF-02B-050613	240-24060-3	30516011.D	05/16/2013	13:33
MRC-OF-02C-050613	240-24060-2	30516012.D	05/16/2013	14:00
MRC-MW-96D-050613	240-24060-5	30516013.D	05/16/2013	14:26
MRC-OF-02A-050613	240-24060-4	30516014.D	05/16/2013	14:53

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Lab Sample ID: CCV 240-86134/2 Calibration Date: 05/16/2013 09:32

Instrument ID: A4HP7 Calib Start Date: 05/01/2013 14:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/01/2013 18:07

Lab File ID: 30516002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5537	0.5653		10.2	10.0	2.1	20.0
N-Nitrosodimethylamine	Ave	0.8684	0.9047		10.4	10.0	4.2	20.0
Pyridine	Ave	1.514	1.571		10.4	10.0	3.8	20.0
Benzaldehyde	Ave	1.294	1.246	0.0100	19.3	20.0	-3.7	20.0
Phenol	Ave	1.754	1.721	0.8000	9.81	10.0	-1.9	20.0
Aniline	Ave	2.354	2.206		9.37	10.0	-6.3	20.0
Bis(2-chloroethyl)ether	Ave	1.660	1.660	0.7000	10.0	10.0	-0.0	20.0
2-Chlorophenol	Ave	1.272	1.247	0.8000	9.81	10.0	-1.9	20.0
1,3-Dichlorobenzene	Ave	1.362	1.326		9.74	10.0	-2.6	20.0
1,4-Dichlorobenzene	Ave	1.398	1.354		9.68	10.0	-3.2	20.0
Benzyl alcohol	Ave	0.8963	0.8348		9.31	10.0	-6.9	20.0
1,2-Dichlorobenzene	Ave	1.297	1.276		9.84	10.0	-1.6	20.0
2-Methylphenol	Ave	1.231	1.203	0.7000	9.77	10.0	-2.3	20.0
bis (2-chloroisopropyl) ether	Ave	2.576	2.588		10.0	10.0	0.5	20.0
Indene	Ave	2.322	2.331		20.1	20.0	0.4	20.0
3 & 4 Methylphenol	Ave	1.293	1.248		9.65	10.0	-3.5	20.0
N-Nitrosodi-n-propylamine	Ave	1.021	1.002	0.5000	9.81	10.0	-1.9	20.0
Acetophenone	Ave	1.994	1.916	0.0100	9.61	10.0	-3.9	20.0
Hexachloroethane	Ave	0.5644	0.5772	0.3000	10.2	10.0	2.3	20.0
Nitrobenzene	Ave	0.4059	0.4112	0.2000	10.1	10.0	1.3	20.0
Isophorone	Ave	0.6969	0.6871	0.4000	9.86	10.0	-1.4	20.0
2,4-Dimethylphenol	Ave	0.3146	0.3043	0.2000	9.67	10.0	-3.3	20.0
2-Nitrophenol	Ave	0.1556	0.1602	0.1000	10.3	10.0	3.0	20.0
Benzoic acid	Lin1		0.1379		15.8	20.0	-21.1*	20.0
Bis(2-chloroethoxy)methane	Ave	0.4240	0.4073	0.3000	9.61	10.0	-3.9	20.0
2,4-Dichlorophenol	Ave	0.2544	0.2522	0.2000	9.91	10.0	-0.9	20.0
1,2,4-Trichlorobenzene	Ave	0.2609	0.2665		10.2	10.0	2.2	20.0
Naphthalene	Ave	0.9392	0.9251	0.7000	9.85	10.0	-1.5	20.0
4-Chloroaniline	Ave	0.4242	0.4063	0.0100	9.58	10.0	-4.2	20.0
Hexachlorobutadiene	Ave	0.1452	0.1494	0.0100	10.3	10.0	2.9	20.0
Caprolactam	Ave	0.0932	0.0890	0.0100	19.1	20.0	-4.5	20.0
4-Chloro-3-methylphenol	Ave	0.2794	0.2592	0.2000	9.28	10.0	-7.2	20.0
2-Methylnaphthalene	Ave	0.6254	0.5959	0.4000	9.53	10.0	-4.7	20.0
1-Methylnaphthalene	Ave	0.5802	0.5538		9.55	10.0	-4.5	20.0
Hexachlorocyclopentadiene	Ave	0.2612	0.2414	0.0500	9.24	10.0	-7.6	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.4338	0.4594	0.0100	10.6	10.0	5.9	20.0
2,4,6-Trichlorophenol	Ave	0.3001	0.2973	0.2000	9.91	10.0	-0.9	20.0
2,4,5-Trichlorophenol	Ave	0.3117	0.3086	0.2000	9.90	10.0	-1.0	20.0
1,1'-Biphenyl	Ave	1.255	1.266	0.0100	10.1	10.0	0.8	20.0
2-Chloronaphthalene	Ave	0.9786	1.022	0.8000	10.4	10.0	4.4	20.0

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Sample No.: STD6 240-84325/10 Date Analyzed: 05/01/2013 18:07

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30501010.D Heated Purge: (Y/N) N

Calibration ID: 14918

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		435263	6.80	1812551	7.92	1071657	9.42
UPPER LIMIT		870526	7.30	3625102	8.42	2143314	9.92
LOWER LIMIT		217632	6.30	906276	7.42	535829	8.92
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84325/11		375221	6.80	1541062	7.92	894274	9.42
CCV 240-86134/2 CCVIS		365713	6.75	1486890	7.86	781731	9.36

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Sample No.: STD6 240-84325/10 Date Analyzed: 05/01/2013 18:07

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30501010.D Heated Purge: (Y/N) N

Calibration ID: 14918

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1414611	10.70	1841239	13.75	1494768	16.20
UPPER LIMIT		2829222	11.20	3682478	14.25	2989536	16.70
LOWER LIMIT		707306	10.20	920620	13.25	747384	15.70
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-84325/11		1149889	10.70	1547068	13.75	1261988	16.20
CCV 240-86134/2 CCVIS		1128422	10.64	1508406	13.64	1146765	16.06

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Sample No.: CCV 240-86134/2 Date Analyzed: 05/16/2013 09:32

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30516002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		365713	6.75	1486890	7.86	781731	9.36
UPPER LIMIT		731426	7.25	2973780	8.36	1563462	9.86
LOWER LIMIT		182857	6.25	743445	7.36	390866	8.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-85576/21-A		331232	6.75	1302348	7.86	697467	9.36
LCS 240-85576/22-A		318470	6.75	1281967	7.86	697617	9.36
240-24060-3	MRC-OF-02B-050613	362850	6.75	1438343	7.86	778910	9.36
240-24060-2	MRC-OF-02C-050613	346795	6.75	1399186	7.86	755671	9.36
240-24060-5	MRC-MW-96D-050613	342022	6.75	1358990	7.86	708155	9.36
240-24060-4	MRC-OF-02A-050613	348562	6.75	1397440	7.86	758320	9.36

DCB = 1,4-Dichlorobenzene-d4

DCB = 1,4-Dichlorobenzene-d4

NPT = Naphthalene-d8

NPT = Naphthalene-d8

Area Limit = 50%-200% of internal standard area

ANT = Acenaphthene-d10

RT Limit = ± 0.5 minutes of internal standard RT

ANT = Acenaphthene-d10

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-24060-1

SDG No.:

Sample No.: CCV 240-86134/2 Date Analyzed: 05/16/2013 09:32

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 30516002.D Heated Purge: (Y/N) N

Calibration ID: 15048

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1128422	10.64	1508406	13.64	1146765	16.06
UPPER LIMIT		2256844	11.14	3016812	14.14	2293530	16.56
LOWER LIMIT		564211	10.14	754203	13.14	573383	15.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-85576/21-A		1201971	10.64	1297803	13.64	1091678	16.05
LCS 240-85576/22-A		969888	10.64	1352283	13.64	1066732	16.05
240-24060-3	MRC-OF-02B-050613	1360054	10.64	1429631	13.64	1245236	16.05
240-24060-2	MRC-OF-02C-050613	1330216	10.64	1412813	13.64	1211347	16.05
240-24060-5	MRC-MW-96D-050613	1260675	10.64	1333202	13.64	1140462	16.05
240-24060-4	MRC-OF-02A-050613	1290126	10.64	1345392	13.64	1176675	16.05

PHN = Phenanthrene-d10

PHN = Phenanthrene-d10

CRY = Chrysene-d12

CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area

PRY = Perylene-d12

RT Limit = ± 0.5 minutes of internal standard RT

PRY = Perylene-d12

Column used to flag values outside QC limits

FORM VIII 8270D

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-24060-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 MDL Date: 02/22/2011 10:07

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	5	0.9
Barium	135	5	0.3
Beryllium	9	1	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	10	0.2
Nickel	60	2	0.5
Selenium		5	0.5
Silver	107	1	0.1
Thallium	205	2	0.2
Vanadium	51	20	0.8
Zinc	66	20	4

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job Number: 240-24060-1

SDG Number:

Matrix: Water Instrument ID: ICPMS5

Method: 6020 XMDL Date: 11/16/2011 09:39

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121	2	0.3
Arsenic	75	1	0.9
Barium	135	1	0.3
Beryllium	9	0.5	0.1
Cadmium	114	1	0.1
Chromium	52	2	0.9
Cobalt	59	1	0.1
Copper		2	0.5
Lead	208	1	0.2
Molybdenum	98	2	0.2
Nickel	60	2	0.5
Selenium		2	0.5
Silver	107	1	0.1
Thallium	205	1	0.2
Vanadium	51	2	0.8
Zinc	66	20	4

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-24060-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A MDL Date: 07/06/2011 10:19

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Mercury		0.0002	0.0001

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Irvine Job Number: 240-24060-1

SDG Number:

Matrix: Water Instrument ID: CV-HG3

Method: 7470A XMDL Date: 11/09/2010 14:01

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.1

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Irvine Job No: 240-24060-1

SDG No.:

Instrument ID: ICPMS5 Date: 12/06/2012 11:03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		4000	6020
Arsenic		4000	6020
Beryllium		4000	6020
Cadmium		4000	6020
Barium		4000	6020
Chromium		4000	6020
Copper		3600	6020
Nickel		3150	6020
Lead		4000	6020
Selenium		4000	6020
Cobalt		4000	6020
Silver		100	6020
Thallium		4000	6020
Zinc		4000	6020
Molybdenum		4000	6020
Vanadium		4000	6020

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-105876/1-A	05/20/2013 17:50	105876		20	20
LCS 440-105876/2-A	05/20/2013 17:50	105876		20	20
240-23950-A-2-B DU	05/20/2013 17:50	105876		20	20
240-23950-J-2-E MS	05/20/2013 17:50	105876		20	20
240-23950-J-2-F MSD	05/20/2013 17:50	105876		20	20
240-24060-5	05/20/2013 17:50	105876		20	20

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-105876/1-A

Instrument Code: CV-HG3 Batch No.: 106022

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23950-J-2-E MS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	6.80		0.15	J	8.00	83	70-130		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-23950-J-2-F MSD

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	7.09	8.00	87	70-130	4	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: _____ Lab ID: 240-23950-A-2-B DU

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.15	J	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 440-105876/2-A

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

Sample Matrix: Water LCS Source: ME 1PPM HG1_00082

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	8.00	7.83		98	80	120		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 440-103356/1-A	05/09/2013 12:52	103356		50	50
LCS 440-103356/2-A	05/09/2013 12:52	103356		50	50
240-23710-A-3-G DU	05/09/2013 12:52	103356		50	50
240-23710-A-3-H MS	05/09/2013 12:52	103356		50	50
240-23710-A-3-E MSD	05/09/2013 12:52	103356		50	50
240-24060-5	05/09/2013 12:52	103356		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 440-103356/1-A

Instrument Code: ICPMS5 Batch No.: 103576

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-39-3	Barium	5.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-50-8	Copper	2.0	U		6020
7440-02-0	Nickel	0.573	J		6020
7439-92-1	Lead	1.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-66-6	Zinc	20	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-62-2	Vanadium	20	U		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-H MS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	79.7		2.0	U	80.0	100	75-125		6020
Arsenic	79.3		5.0	U	80.0	99	75-125		6020
Beryllium	85.0		1.0	U	80.0	106	75-125		6020
Cadmium	74.2		1.0	U	80.0	93	75-125		6020
Barium	154		74		80.0	100	75-125		6020
Chromium	75.9		2.0	U	80.0	95	75-125		6020
Copper	72.2		0.65	J	80.0	89	75-125		6020
Nickel	73.1		2.4		80.0	88	75-125		6020
Lead	70.8		1.0	U	80.0	89	75-125		6020
Selenium	74.7		2.4	J	80.0	90	75-125		6020
Cobalt	75.2		1.6		80.0	92	75-125		6020
Silver	76.3		1.0	U	80.0	95	75-125		6020
Thallium	72.3		2.0	U	80.0	90	75-125		6020
Zinc	65.1		20	U	80.0	81	75-125		6020
Molybdenum	82.9		0.21	J	80.0	103	75-125		6020
Vanadium	79.3		20	U	80.0	99	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-E MSD

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	79.2		80.0	99	75-125	1	20		6020
Arsenic	78.8		80.0	99	75-125	1	20		6020
Beryllium	84.2		80.0	105	75-125	1	20		6020
Cadmium	74.5		80.0	93	75-125	0	20		6020
Barium	154		80.0	100	75-125	0	20		6020
Chromium	75.2		80.0	94	75-125	1	20		6020
Copper	71.5		80.0	89	75-125	1	20		6020
Nickel	73.0		80.0	88	75-125	0	20		6020
Lead	71.0		80.0	89	75-125	0	20		6020
Selenium	75.1		80.0	91	75-125	1	20		6020
Cobalt	74.4		80.0	91	75-125	1	20		6020
Silver	76.1		80.0	95	75-125	0	20		6020
Thallium	72.5		80.0	91	75-125	0	20		6020
Zinc	65.2		80.0	81	75-125	0	20		6020
Molybdenum	83.3		80.0	104	75-125	0	20		6020
Vanadium	79.5		80.0	99	75-125	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-23710-A-3-B PDS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	78.7		2.0	U	80.0	98	75-125		6020
Arsenic	79.6		5.0	U	80.0	99	75-125		6020
Beryllium	83.7		1.0	U	80.0	105	75-125		6020
Cadmium	74.2		1.0	U	80.0	93	75-125		6020
Barium	156		74		80.0	102	75-125		6020
Chromium	76.2		2.0	U	80.0	95	75-125		6020
Copper	73.0		0.65	J	80.0	90	75-125		6020
Nickel	74.2		2.4		80.0	90	75-125		6020
Lead	71.7		1.0	U	80.0	90	75-125		6020
Selenium	76.2		2.4	J	80.0	92	75-125		6020
Cobalt	76.2		1.6		80.0	93	75-125		6020
Silver	69.9		1.0	U	80.0	87	75-125		6020
Thallium	73.8		2.0	U	80.0	92	75-125		6020
Zinc	65.8		20	U	80.0	82	75-125		6020
Molybdenum	83.5		0.21	J	80.0	104	75-125		6020
Vanadium	80.1		20	U	80.0	100	75-125		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Client ID: Lab ID: 240-23710-A-3-G DU

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

% Solids for Sample: % Solids for Duplicate:

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	2.0	2.0	U	2.0	U	NC		6020
Arsenic	5.0	5.0	U	5.0	U	NC		6020
Beryllium	1.0	1.0	U	1.0	U	NC		6020
Cadmium	1.0	1.0	U	1.0	U	NC		6020
Barium	5.0	74		76.7		3		6020
Chromium	2.0	2.0	U	2.0	U	NC		6020
Copper	2.0	0.65	J	0.664	J	2		6020
Nickel	2.0	2.4		2.40		0.8		6020
Lead	1.0	1.0	U	1.0	U	NC		6020
Selenium	5.0	2.4	J	2.18	J	9		6020
Cobalt	1.0	1.6		1.57		0.2		6020
Silver	1.0	1.0	U	1.0	U	NC		6020
Thallium	2.0	2.0	U	2.0	U	NC		6020
Zinc	20	20	U	20	U	NC		6020
Molybdenum	10	0.21	J	10	U	NC		6020
Vanadium	20	20	U	20	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 440-103356/2-A

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

Sample Matrix: Water LCS Source: ME ICPMS CAL_00017

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	80.0	82.8		104	80	120		6020
Arsenic	80.0	82.5		103	80	120		6020
Beryllium	80.0	86.3		108	80	120		6020
Cadmium	80.0	82.2		103	80	120		6020
Barium	80.0	83.7		105	80	120		6020
Chromium	80.0	81.3		102	80	120		6020
Copper	80.0	80.8		101	80	120		6020
Nickel	80.0	81.2		101	80	120		6020
Lead	80.0	79.6		99	80	120		6020
Selenium	80.0	82.8		103	80	120		6020
Cobalt	80.0	81.4		102	80	120		6020
Silver	80.0	84.9		106	80	120		6020
Thallium	80.0	79.9		100	80	120		6020
Zinc	80.0	74.8		93	80	120		6020
Molybdenum	80.0	84.5		106	80	120		6020
Vanadium	80.0	83.0		104	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-23950-J-2-A SD ^10

SDG No:

Lab Name: TestAmerica Irvine Job No: 240-24060-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	4.0	U	20	U	NC		6020
Arsenic	7.7	J	50	U	NC		6020
Beryllium	15		15.1		3.0		6020
Cadmium	0.60	J	1.07	J	NC		6020
Barium	320		362		11		6020
Chromium	680		761		12		6020
Copper	120		138		13		6020
Nickel	620		668		8.1		6020
Lead	41		43.4		4.8		6020
Selenium	2.2	J	50	U	NC		6020
Cobalt	220		236		9.6		6020
Silver	2.0	U	10	U	NC		6020
Thallium	0.69	J	20	U	NC		6020
Zinc	380		372		NC		6020
Molybdenum	12	J	13.5	J	NC		6020
Vanadium	81		102	J	26	V	6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 05/20/2013 13:17 End Date: 05/20/2013 21:50

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
IC 440-105744/6-A	1		13:17	X
IC 440-105744/7-A	1		13:20	X
IC 440-105744/8-A	1		13:22	X
IC 440-105744/9-A	1		13:25	X
IC 440-105744/10-A	1		13:27	X
IC 440-105744/11-A	1		13:30	X
ICV 440-105744/1-A	1		13:52	X
ICB 440-105744/2-A	1		13:54	X
CRA 440-105744/5-A	1		13:57	X
ZZZZZZ			13:59	
ZZZZZZ			14:02	
ZZZZZZ			14:04	
ZZZZZZ			14:07	
ZZZZZZ			14:09	
ZZZZZZ			14:12	
ZZZZZZ			14:14	
ZZZZZZ			14:17	
ZZZZZZ			14:19	
CCV 440-105744/3-A			14:22	
CCB 440-105744/4-A			14:24	
ZZZZZZ			14:27	
ZZZZZZ			14:29	
ZZZZZZ			14:32	
ZZZZZZ			14:35	
ZZZZZZ			14:37	
ZZZZZZ			14:40	
ZZZZZZ			14:42	
ZZZZZZ			14:45	
CCV 440-105744/3-A			14:47	
CCB 440-105744/4-A			14:50	
ZZZZZZ			14:52	
ZZZZZZ			14:55	
ZZZZZZ			14:57	
ZZZZZZ			15:00	
ZZZZZZ			15:02	
ZZZZZZ			15:05	
ZZZZZZ			15:07	
ZZZZZZ			15:10	
CCV 440-105744/3-A			15:12	
CCB 440-105744/4-A			15:15	
ZZZZZZ			15:18	
ZZZZZZ			15:20	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Instrument ID: CV-HG3 Analysis Method: 7470A

Start Date: 05/20/2013 13:17 End Date: 05/20/2013 21:50

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			20:43	
CCV 440-105744/3-A	1		20:46	X
CCB 440-105744/4-A	1		20:48	X
ZZZZZZ			20:51	
ZZZZZZ			20:54	
ZZZZZZ			20:56	
ZZZZZZ			20:59	
MB 440-105876/1-A	1	T	21:01	X
LCS 440-105876/2-A	1	T	21:04	X
ZZZZZZ			21:06	
240-23950-A-2-B DU	1	T	21:09	X
240-23950-J-2-E MS	1	T	21:12	X
240-23950-J-2-F MSD	1	T	21:14	X
CCV 440-105744/3-A	1		21:17	X
CCB 440-105744/4-A	1		21:19	X
240-24060-5	1	T	21:22	X
ZZZZZZ			21:24	
ZZZZZZ			21:27	
ZZZZZZ			21:29	
ZZZZZZ			21:32	
ZZZZZZ			21:35	
ZZZZZZ			21:37	
ZZZZZZ			21:40	
ZZZZZZ			21:42	
CCV 440-105744/3-A	1		21:45	X
CCB 440-105744/4-A	1		21:47	X
CRA 440-105744/5-A	1		21:50	X

Prep Types:
T = Total/NA

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

ICV Source: ME 1PPM HG2_00080 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00082

Analyte	ICV 440-105744/1-A 05/20/2013 13:52				CCV 440-105744/3-A 05/20/2013 20:46				CCV 440-105744/3-A 05/20/2013 21:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	8.12		8.00	102	4.16		4.00	104	4.09		4.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

ICV Source: ME 1PPM HG2_00080 Concentration Units: ug/L

CCV Source: ME 1PPM HG1_00082

Analyte	CCV 440-105744/3-A 05/20/2013 21:45											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.08		4.00	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Method: 7470A Instrument ID: CV-HG3

Lab Sample ID: CRA 440-105744/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00082

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.204		102	50-150

Lab Sample ID: CRA 440-105744/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00082

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.236		118	50-150

Lab Sample ID: CRA 440-105744/5-A Concentration Units: ug/L

CRQL Check Standard Source: ME 1PPM HG1_00082

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.238		119	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-105744/2-A 05/20/2013 13:54		CCB 440-105744/4-A 05/20/2013 20:48		CCB 440-105744/4-A 05/20/2013 21:19		CCB 440-105744/4-A 05/20/2013 21:47	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.105	J	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Instrument ID: ICPMS5 Analysis Method: 6020

Start Date: 05/09/2013 18:46 End Date: 05/09/2013 22:40

Lab Sample Id	D/F	Type	Time	Analytes																													
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn														
STD0 440-103576/1 IC	1		18:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD1 440-103576/2 IC	1		18:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD2 440-103576/3 IC	1		18:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD3 440-103576/4 IC	1		18:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
STD4 440-103576/5 IC	1		18:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICV 440-103576/6	1		18:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICB 440-103576/7	1		19:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			19:02																														
CRI 440-103576/9	1		19:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CRI 440-103576/10	1		19:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSA 440-103576/11	1		19:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ICSAB 440-103576/12	1		19:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
RINSE 440-103576/13			19:14																														
CCV 440-103576/14	1		21:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-103576/15	1		21:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
MB 440-103356/1-A	1	R	22:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
LCS 440-103356/2-A	1	R	22:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			22:05																														
240-23710-A-3-G DU	1	R	22:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-23710-A-3-H MS	1	R	22:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-23710-A-3-E MSD	1	R	22:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
240-23710-A-3-B PDS	1	R	22:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			22:16																														
240-24060-5	1	R	22:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCV 440-103576/25	1		22:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-103576/26	1		22:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
ZZZZZZ			22:25																														
ZZZZZZ			22:27																														
ZZZZZZ			22:29																														
ZZZZZZ			22:31																														
ZZZZZZ			22:34																														
240-23950-J-2-A SD ^10	10	R	22:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCV 440-103576/33	1		22:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
CCB 440-103576/34	1		22:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														

Prep Types:
R = Total Recoverable

FORM XIII-IN

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	ICV 440-103576/6 05/09/2013 18:57				CCV 440-103576/14 05/09/2013 21:55				CCV 440-103576/25 05/09/2013 22:20			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	22.7		25.0	91	50.1		50.0	100	49.6		50.0	99
Arsenic	25.9		25.0	104	50.9		50.0	102	49.8		50.0	100
Barium	25.9		25.0	103	50.6		50.0	101	49.9		50.0	100
Beryllium	25.3		25.0	101	52.4		50.0	105	51.6		50.0	103
Cadmium	25.2		25.0	101	50.3		50.0	101	49.7		50.0	99
Chromium	25.9		25.0	104	49.4		50.0	99	50.0		50.0	100
Cobalt	25.8		25.0	103	50.1		50.0	100	50.0		50.0	100
Copper	26.0		25.0	104	49.1		50.0	98	48.8		50.0	98
Lead	26.1		25.0	104	48.6		50.0	97	48.6		50.0	97
Molybdenum	26.2		25.0	105	51.0		50.0	102	50.6		50.0	101
Nickel	26.1		25.0	104	49.3		50.0	99	48.9		50.0	98
Selenium	25.1		25.0	100	50.3		50.0	101	50.2		50.0	100
Silver	25.0		25.0	100	50.2		50.0	100	49.8		50.0	100
Thallium	25.5		25.0	102	48.8		50.0	98	49.4		50.0	99
Vanadium	26.8		25.0	107	51.6		50.0	103	50.5		50.0	101
Zinc	26.5		25.0	106	46.4		50.0	93	46.2		50.0	92

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

ICV Source: MEICPMS4 ICV_00214 Concentration Units: ug/L

CCV Source: MEICPMS4 CCV_00214

Analyte	CCV 440-103576/33 05/09/2013 22:38											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	49.8		50.0	100								
Arsenic	50.8		50.0	102								
Barium	50.1		50.0	100								
Beryllium	50.3		50.0	101								
Cadmium	49.5		50.0	99								
Chromium	49.7		50.0	99								
Cobalt	50.5		50.0	101								
Copper	48.9		50.0	98								
Lead	48.9		50.0	98								
Molybdenum	50.1		50.0	100								
Nickel	48.8		50.0	98								
Selenium	50.6		50.0	101								
Silver	49.6		50.0	99								
Thallium	49.8		50.0	100								
Vanadium	50.9		50.0	102								
Zinc	46.3		50.0	93								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103576/9 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI2_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.06		103	50-150
Arsenic	2.00	1.65		82	50-150
Beryllium	1.00	1.06		106	50-150
Cadmium	1.00	1.07		107	50-150
Barium	2.00	2.25		112	50-150
Chromium	2.00	2.29		114	50-150
Copper	2.00	2.21		110	50-150
Nickel	2.00	2.46		123	50-150
Lead	2.00	2.14		107	50-150
Selenium	2.00	1.95	J	98	50-150
Cobalt	1.00	1.08		108	50-150
Silver	2.00	2.11		105	50-150
Thallium	2.00	2.05		103	50-150
Zinc	10.0	11.4	J	114	50-150
Molybdenum	2.00	2.15		108	50-150
Vanadium	4.00	4.35		109	50-150

Lab Sample ID: CRI 440-103576/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.06	J	106	50-150
Arsenic	1.00	0.970	J	97	50-150
Beryllium	0.500	0.537		107	50-150
Cadmium	0.500	0.531	J	106	50-150
Barium	1.00	1.07		107	50-150
Chromium	1.00	1.06	J	106	50-150
Copper	1.00	1.16	J	116	50-150
Nickel	1.00	1.26	J	126	50-150
Lead	1.00	1.07		107	50-150
Selenium	1.00	1.02	J	102	50-150
Cobalt	0.500	0.535	J	107	50-150
Silver	1.00	1.45		145	50-150
Thallium	1.00	1.03		103	50-150
Zinc	5.00	5.49	J	110	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Method: 6020 Instrument ID: ICPMS5

Lab Sample ID: CRI 440-103576/10 Concentration Units: ug/L

CRQL Check Standard Source: MEICPMS4_CRI_00024

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Molybdenum	1.00	1.08	J	108	50-150
Vanadium	2.00	2.31		115	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 440-103576/7 05/09/2013 19:00		CCB 440-103576/15 05/09/2013 21:58		CCB 440-103576/26 05/09/2013 22:23		CCB 440-103576/34 05/09/2013 22:40	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.332	J	2.0	U	2.0	U	2.0	U
Arsenic	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Beryllium	0.50	0.50	U	0.50	U	0.50	U	0.50	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	0.117	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Nickel	2.0	2.0	U	0.601	J	2.0	U	2.0	U
Selenium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	0.107	J
Thallium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Vanadium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Lab Sample ID: ICSA 440-103576/11 Instrument ID: ICPMS5

Lab File ID: 012ICSA.d ICS Source: MEICPMS4 ICSA_00211

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.329**	
Arsenic		**-0.0410**	
Barium		**0.276**	
Beryllium		**0.0180**	
Cadmium		**1.52**	
Chromium		**0.955**	
Cobalt		**0.155**	
Copper		**1.56**	
Lead		**0.121**	
Molybdenum	**2000**	**2052**	**103**
Nickel		**2.14**	
Selenium		**-0.183**	
Silver		**0.0910**	
Thallium		**0.0160**	
Vanadium		**0.431**	
Zinc		**-0.945**	
Aluminum	*100000*	*88573*	*89*
Calcium	*100000*	*92794*	*93*
Cerium		*0.0450*	
Iron	*100000*	*90859*	*91*
Magnesium	*100000*	*91805*	*92*
Manganese		*0.153*	
Potassium	*100000*	*93281*	*93*
Sodium	*100000*	*92204*	*92*
Sr		*4.82*	
Tin		*0.149*	
Uranium		*0.0140*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

Lab Sample ID: ICSAB 440-103576/12 Instrument ID: ICPMS5

Lab File ID: 013ICSB.d ICS Source: MEICPMS4 ICSB_00210

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**20.0**	**20.9**	**105**
Arsenic	**20.0**	**19.2**	**96**
Barium	**20.0**	**21.3**	**106**
Beryllium	**20.0**	**20.5**	**103**
Cadmium	**20.0**	**20.7**	**103**
Chromium	**20.0**	**20.0**	**100**
Cobalt	**20.0**	**19.3**	**97**
Copper	**20.0**	**19.7**	**99**
Lead	**20.0**	**19.5**	**97**
Molybdenum	**2020**	**2043**	**101**
Nickel	**20.0**	**20.4**	**102**
Selenium	**20.0**	**18.0**	**90**
Silver	**20.0**	**19.3**	**96**
Thallium	**20.0**	**18.7**	**93**
Vanadium	**20.0**	**20.2**	**101**
Zinc	**20.0**	**16.0**	**80**
Aluminum	*100000*	*87671*	*88*
Calcium	*101000*	*93042*	*92*
Cerium	*20.0*	*21.1*	*105*
Iron	*100000*	*90048*	*90*
Magnesium	*101000*	*92041*	*92*
Manganese	*20.0*	*19.4*	*97*
Potassium	*101000*	*93432*	*93*
Sodium	*101000*	*91837*	*91*
Sr	*20.0*	*26.0*	*130*
Tin	*20.0*	*20.8*	*104*
Uranium	*20.0*	*20.8*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/09/2013 End Date: 05/09/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc-45	Q	Element Ge	Q	Element Ge	Q	Element In-115	Q
STD0 440-103576/1	18:46	100		100		100		100		100	
STD1 440-103576/2	18:48	100		100		99		100		100	
STD2 440-103576/3	18:51	101		100		100		100		100	
STD3 440-103576/4	18:53	99		100		100		100		99	
STD4 440-103576/5	18:55	100		99		98		98		100	
ICV 440-103576/6	18:57	99		99		99		99		99	
ICB 440-103576/7	19:00	98		99		98		99		99	
CRI 440-103576/9	19:04	99		100		99		100		100	
CRI 440-103576/10	19:07	100		102		100		101		100	
ICSA 440-103576/11	19:09	91		98		97		92		91	
ICSAB 440-103576/12	19:12	92		97		98		92		91	
CCV 440-103576/14	21:55	100		112		108		108		106	
CCB 440-103576/15	21:58	99		111		108		109		106	
MB 440-103356/1-A	22:00	101		112		108		108		107	
LCS 440-103356/2-A	22:02	96		106		103		103		100	
240-23710-A-3-G DU	22:07	95		111		104		104		100	
240-23710-A-3-H MS	22:09	95		112		104		104		100	
240-23710-A-3-E MSD	22:11	95		111		103		104		100	
240-23710-A-3-B PDS	22:14	93		108		101		102		98	
240-24060-5	22:18	103		109		107		106		105	
CCV 440-103576/25	22:20	104		111		106		107		106	
CCB 440-103576/26	22:23	104		109		107		108		105	
240-23950-J-2-A SD	22:36	101		108		104		104		104	
CCV 440-103576/33	22:38	102		106		102		104		104	
CCB 440-103576/34	22:40	103		106		103		104		105	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Irvine Job No.: 240-24060-1

SDG No.:

ICP-MS Instrument ID: ICPMS5 Start Date: 05/09/2013 End Date: 05/09/2013

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb-159	Q	Element	Q	Element	Q	Element	Q	Element	Q
STD0 440-103576/1	18:46	100									
STD1 440-103576/2	18:48	100									
STD2 440-103576/3	18:51	100									
STD3 440-103576/4	18:53	100									
STD4 440-103576/5	18:55	99									
ICV 440-103576/6	18:57	99									
ICB 440-103576/7	19:00	100									
CRI 440-103576/9	19:04	99									
CRI 440-103576/10	19:07	100									
ICSA 440-103576/11	19:09	96									
ICSAB 440-103576/12	19:12	95									
CCV 440-103576/14	21:55	103									
CCB 440-103576/15	21:58	104									
MB 440-103356/1-A	22:00	103									
LCS 440-103356/2-A	22:02	99									
240-23710-A-3-G DU	22:07	101									
240-23710-A-3-H MS	22:09	101									
240-23710-A-3-E MSD	22:11	101									
240-23710-A-3-B PDS	22:14	99									
240-24060-5	22:18	103									
CCV 440-103576/25	22:20	104									
CCB 440-103576/26	22:23	104									
240-23950-J-2-A SD	22:36	103									
CCV 440-103576/33	22:38	103									
CCB 440-103576/34	22:40	104									

APPENDIX E—ANALYTICAL DATA TABLE

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 70

LOCATION	MRC-MW01A	MRC-MW02A	MRC-MW03A	MRC-MW04A	EXT-MW04	MRC-MW05A	MRC-MW06A
SAMPLE ID	MRC-MW-01A-041013	MRC-MW-02A-041013	MRC-MW03A-041813	MRC-MW04A-041813	MRC-EXT04-040813	MRC-MW-05A-041013	MRC-MW-06A-042513
SAMPLE DATE	4/10/2013	4/10/2013	4/18/2013	4/18/2013	4/8/2013	4/10/2013	4/25/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	--	0.23 U	--	--	--	--	--
1,1,1-TRICHLOROETHANE	--	0.22 U	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	--	0.18 U	--	--	--	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.28 U	--	--	--	--	--
1,1-DICHLOROETHANE	--	0.15 U	--	--	--	--	--
1,1-DICHLOROETHENE	--	0.19 U	--	--	--	--	--
1,1-DICHLOROPROPENE	--	0.13 U	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	--	0.17 U	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	--	0.43 U	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	--	0.0059 U	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	--	0.15 U	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	--	0.12 U	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE	--	0.67 U	--	--	--	--	--
1,2-DIBROMOETHANE	--	0.24 U	--	--	--	--	--
1,2-DICHLOROBENZENE	--	0.13 U	--	--	--	--	--
1,2-DICHLOROETHANE	--	0.22 U	--	--	--	--	--
1,2-DICHLOROPROPANE	--	0.18 U	--	--	--	--	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	0.14 U	--	--	--	--	--
1,3-DICHLOROPROPANE	--	0.16 U	--	--	--	--	--
1,4-DICHLOROBENZENE	--	0.13 U	--	--	--	--	--
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	--	0.13 U	--	--	--	--	--
2-BUTANONE	--	0.57 U	--	--	--	--	--
2-CHLOROETHYL VINYL ETHER	--	0.99 U	--	--	--	--	--
2-CHLOROTOLUENE	--	0.11 U	--	--	--	--	--
2-HEXANONE	--	0.41 U	--	--	--	--	--
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	--	0.18 U	--	--	--	--	--
4-ISOPROPYLTOLUENE	--	0.12 U	--	--	--	--	--
4-METHYL-2-PENTANONE	--	0.32 U	--	--	--	--	--
ACETONE	--	1.1 U	--	--	--	--	--
BENZENE	--	0.13 U	--	--	--	--	--
BROMOBENZENE	--	0.13 U	--	--	--	--	--
BROMOCHLOROMETHANE	--	0.29 U	--	--	--	--	--
BROMODICHLOROMETHANE	--	0.15 U	--	--	--	--	--
BROMOFORM	--	0.64 U	--	--	--	--	--
BROMOMETHANE	--	0.41 U	--	--	--	--	--
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	0.13 U	--	--	--	--	--
CARBON TETRACHLORIDE	--	0.13 U	--	--	--	--	--
CHLOROBENZENE	--	0.15 U	--	--	--	--	--
CHLORODIBROMOMETHANE	--	0.18 U	--	--	--	--	--
CHLOROETHANE	--	0.29 U	--	--	--	--	--
CHLOROFORM	--	0.16 U	--	--	--	--	--
CHLOROMETHANE	--	0.3 U	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	--	0.17 U	--	--	--	--	--
CIS-1,3-DICHLOROPROPENE	--	0.14 U	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 70

LOCATION	MRC-MW01A	MRC-MW02A	MRC-MW03A	MRC-MW04A	EXT-MW04	MRC-MW05A	MRC-MW06A
SAMPLE ID	MRC-MW-01A-041013	MRC-MW-02A-041013	MRC-MW03A-041813	MRC-MW04A-041813	MRC-EXT04-040813	MRC-MW-05A-041013	MRC-MW-06A-042513
SAMPLE DATE	4/10/2013	4/10/2013	4/18/2013	4/18/2013	4/8/2013	4/10/2013	4/25/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	--	0.28 U	--	--	--	--	--
DICHLORODIFLUOROMETHANE	--	1.1	--	--	--	--	--
DIISOPROPYL ETHER	--	1.5 U	--	--	--	--	--
ETHYL TERT-BUTYL ETHER	--	0.11 U	--	--	--	--	--
ETHYLBENZENE	--	0.17 U	--	--	--	--	--
HEXACHLOROBUTADIENE	--	0.3 UJ	--	--	--	--	--
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	0.13 U	--	--	--	--	--
M+P-XYLENES	--	0.24 U	--	--	--	--	--
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	0.17 U	--	--	--	--	--
METHYLENE CHLORIDE	--	0.33 U	--	--	--	--	--
NAPHTHALENE	--	0.24 U	--	--	--	--	--
N-BUTYLBENZENE	--	0.12 U	--	--	--	--	--
N-PROPYLBENZENE	--	0.14 U	--	--	--	--	--
O-XYLENE	--	0.14 U	--	--	--	--	--
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	--	0.13 U	--	--	--	--	--
STYRENE	--	0.11 U	--	--	--	--	--
TERT-AMYL METHYL ETHER	--	0.067 U	--	--	--	--	--
TERT-BUTYLBENZENE	--	0.13 U	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	--	3.9 U	--	--	--	--	--
TETRACHLOROETHENE	--	0.29 U	--	--	--	--	--
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	--	0.13 U	--	--	--	--	--
TOTAL XYLENES	--	0.28 U	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	--	0.19 U	--	--	--	--	--
TRANS-1,3-DICHLOROPROPENE	--	0.19 U	--	--	--	--	--
TRICHLOROETHENE	--	0.17 U	--	--	--	--	--
TRICHLOROFLUOROMETHANE	--	3.7	--	--	--	--	--
VINYL ACETATE	--	0.19 U	--	--	--	--	--
VINYL CHLORIDE	--	0.22 U	--	--	--	--	--
VOLATILE GASES (UG/L)							
ETHANE	--	--	0.1 U	--	--	--	--
ETHENE	--	--	0.37 U	--	--	--	--
METHANE	--	--	880	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW01A	MRC-MW02A	MRC-MW03A	MRC-MW04A	EXT-MW04	MRC-MW05A	MRC-MW06A
SAMPLE ID	MRC-MW-01A-041013	MRC-MW-02A-041013	MRC-MW03A-041813	MRC-MW04A-041813	MRC-EXT04-040813	MRC-MW-05A-041013	MRC-MW-06A-042513
SAMPLE DATE	4/10/2013	4/10/2013	4/18/2013	4/18/2013	4/8/2013	4/10/2013	4/25/2013
METALS (UG/L)							
ANTIMONY	0.4 B	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.37 B
ARSENIC	1.1 J	0.9 U	3.8 J	0.9 U	0.9 U	1 J	1.8 U
BARIUM	38	110	68	170	69	290	800
BERYLLIUM	0.1 U	5 K	0.1 U	1.1 L	0.1 U	13 K	32
CADMIUM	0.1 U	0.23 J	0.1 U	1.9	0.1 U	0.69 J	2.9
CALCIUM	--	--	49000	--	--	--	--
CHROMIUM	0.9 U	0.9 U	0.9 U	0.9 U	1.3 J	0.9 U	16
COBALT	0.72 J	75	6.5	380	4.8	220	960
COPPER	8.2	58	11	14	2.4 L	12	38
IRON	--	--	20000	--	--	--	--
LEAD	0.52 J	0.4 J	1.4	0.61 J	0.29 J	1.1	1.1 J
MAGNESIUM	--	--	16000	--	--	--	--
MANGANESE	--	--	240	--	--	--	--
MERCURY	0.1 U	0.1 U	0.12 U	0.1 U	0.1 U	0.1 U	0.1 U
MOLYBDENUM	0.48 B	0.79 B	0.76 B	0.69 B	1.2 J	0.38 B	1.5 J
NICKEL	4.2	110	32	480	4.4 B	330	1600
POTASSIUM	--	--	3600 J	--	--	--	--
SELENIUM	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U
SILICON DIOXIDE	--	--	5800 K	--	--	--	--
SILVER	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 B	0.41 J
SODIUM	--	--	64000	--	--	--	--
THALLIUM	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.23 J	0.88 J
VANADIUM	3.1 J	1.9 J	3.7 J	0.83 J	1 J	1.1 J	1.6 U
ZINC	5.3 J	93	120 K	390 K	5.5 J	500	1700
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	200	--	--	--	--
AMMONIA-N (MG/L)	--	--	3.5	--	--	--	--
CHLORIDE (MG/L)	--	--	120	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	17	--	--	--	--
NITRATE-N (MG/L)	--	--	0.16 K	--	--	--	--
NITRITE-N (MG/L)	--	--	0.012 U	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	0.044 U	--	--	--	--
SULFATE (MG/L)	--	--	11	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	370	--	--	--	--
PERCHLORATE (UG/L)	0.17 J	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	EXT-MW06	MRC-MW07A	MRC-MW08A	MRC-MW10A	MRC-MW11A	MRC-MW11C	MRC-MW12A
SAMPLE ID	MRC-EXT06-040813	MRC-MW-07A-042513	MRC-MW08A-040513	MRC-MW10A-042413	MRC-MW-11A-040913	MRC-MW11C-042413	MRC-MW12A-040213
SAMPLE DATE	4/8/2013	4/25/2013	4/5/2013	4/24/2013	4/9/2013	4/24/2013	4/2/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	--	--	0.23 U	0.23 U	0.23 U	0.23 U	13 U
1,1,1-TRICHLOROETHANE	--	--	0.22 U	0.22 U	0.22 U	0.22 U	12 U
1,1,2,2-TETRACHLOROETHANE	--	--	0.18 U	0.18 U	0.18 U	0.18 U	10 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	--	0.28 U	0.28 U	0.28 U	0.28 U	16 U
1,1-DICHLOROETHANE	--	--	0.15 U	0.22 J	5.1	0.15 U	25 J
1,1-DICHLOROETHENE	--	--	0.19 U	0.39 J	27	0.19 U	310
1,1-DICHLOROPROPENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
1,2,3-TRICHLOROBENZENE	--	--	0.17 U	0.17 U	0.17 U	0.17 UJ	9.4 U
1,2,3-TRICHLOROPROPANE	--	--	0.43 U	0.43 U	0.43 U	0.43 U	24 U
1,2,3-TRIMETHYLBENZENE	--	--	0.0059 U	0.0059 U	0.0059 U	0.0059 U	0.33 U
1,2,4-TRICHLOROBENZENE	--	--	0.15 U	0.15 U	0.15 U	0.15 UJ	8.3 U
1,2,4-TRIMETHYLBENZENE	--	--	0.12 U	0.12 U	0.12 U	0.12 U	6.7 U
1,2-DIBROMO-3-CHLOROPROPANE	--	--	0.67 U	0.67 U	0.67 U	0.67 U	37 U
1,2-DIBROMOETHANE	--	--	0.24 U	0.24 U	0.24 U	0.24 U	13 U
1,2-DICHLOROBENZENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
1,2-DICHLOROETHANE	--	--	0.22 U	0.22 U	0.22 U	0.22 U	12 U
1,2-DICHLOROPROPANE	--	--	0.18 U	0.18 U	0.18 U	0.18 U	10 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	--	0.14 U	0.14 U	0.14 U	0.14 U	7.8 U
1,3-DICHLOROPROPANE	--	--	0.16 U	0.16 U	0.16 U	0.16 U	8.9 U
1,4-DICHLOROBENZENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
2-BUTANONE	--	--	0.57 U	0.57 U	0.57 U	0.57 U	32 U
2-CHLOROETHYL VINYL ETHER	--	--	0.99 UR	0.99 U	0.99 U	0.99 U	55 U
2-CHLOROTOLUENE	--	--	0.11 U	0.11 U	0.11 U	0.11 U	6.1 U
2-HEXANONE	--	--	0.41 U	0.41 U	0.41 U	0.41 U	23 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	--	--	0.18 U	0.18 U	0.18 U	0.18 U	10 U
4-ISOPROPYLTOLUENE	--	--	0.12 U	0.12 U	0.12 U	0.12 U	6.7 U
4-METHYL-2-PENTANONE	--	--	0.32 U	0.32 U	0.32 U	0.32 U	18 U
ACETONE	--	--	1.2 J	1.1 UR	1.1 U	1.1 U	61 U
BENZENE	--	--	0.13 U	0.13 U	0.32 B	0.13 U	7.2 U
BROMOBENZENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
BROMOCHLOROMETHANE	--	--	0.29 U	0.29 U	0.29 U	0.29 U	16 U
BROMODICHLOROMETHANE	--	--	0.15 U	0.15 U	0.15 U	0.15 U	8.3 U
BROMOFORM	--	--	0.64 U	0.64 U	0.64 U	0.64 U	36 U
BROMOMETHANE	--	--	0.41 U	0.41 U	0.41 U	0.41 U	23 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
CARBON TETRACHLORIDE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
CHLOROBENZENE	--	--	0.15 U	0.15 U	0.15 U	0.15 U	8.3 U
CHLORODIBROMOMETHANE	--	--	0.18 U	0.18 U	0.18 U	0.18 U	10 U
CHLOROETHANE	--	--	0.29 U	0.29 U	0.29 U	0.29 U	16 U
CHLOROFORM	--	--	0.16 U	0.16 U	0.16 U	0.16 U	8.9 U
CHLOROMETHANE	--	--	0.3 U	0.3 U	0.3 U	0.3 U	17 U
CIS-1,2-DICHLOROETHENE	--	--	0.17 U	0.53 J	5.9	0.17 U	110
CIS-1,3-DICHLOROPROPENE	--	--	0.14 U	0.14 U	0.14 U	0.14 U	7.8 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	EXT-MW06 MRC-EXT06-040813 4/8/2013	MRC-MW07A MRC-MW-07A-042513 4/25/2013	MRC-MW08A MRC-MW08A-040513 4/5/2013	MRC-MW10A MRC-MW10A-042413 4/24/2013	MRC-MW11A MRC-MW-11A-040913 4/9/2013	MRC-MW11C MRC-MW11C-042413 4/24/2013	MRC-MW12A MRC-MW12A-040213 4/2/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	--	--	0.28 U	0.28 U	0.28 U	0.28 U	16 U
DICHLORODIFLUOROMETHANE	--	--	0.31 U	0.31 U	0.31 U	0.31 U	17 U
DIISOPROPYL ETHER	--	--	1.5 U	1.5 U	1.5 U	1.5 U	83 U
ETHYL TERT-BUTYL ETHER	--	--	0.11 U	0.11 U	0.11 U	0.11 U	6.1 U
ETHYLBENZENE	--	--	0.17 U	0.17 U	0.17 U	0.17 U	9.4 U
HEXACHLOROBUTADIENE	--	--	0.3 U	0.3 U	0.3 U	0.3 UJ	17 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
M+P-XYLENES	--	--	0.24 U	0.24 U	0.24 U	0.24 U	13 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	--	0.17 U	0.17 U	0.17 U	0.17 U	9.4 U
METHYLENE CHLORIDE	--	--	0.33 U	0.33 U	0.33 U	0.33 U	32 J
NAPHTHALENE	--	--	0.24 U	0.24 U	0.24 U	0.24 U	13 U
N-BUTYLBENZENE	--	--	0.12 U	0.12 U	0.12 U	0.12 U	6.7 U
N-PROPYLBENZENE	--	--	0.14 U	0.14 U	0.14 U	0.14 U	7.8 U
O-XYLENE	--	--	0.14 U	0.14 U	0.14 U	0.14 U	7.8 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
STYRENE	--	--	0.11 U	0.11 U	0.11 U	0.11 U	6.1 U
TERT-AMYL METHYL ETHER	--	--	0.067 U	0.067 U	0.067 U	0.067 U	3.7 U
TERT-BUTYLBENZENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
TERTIARY-BUTYL ALCOHOL	--	--	3.9 UR	3.9 UR	3.9 UR	3.9 UR	220 UR
TETRACHLOROETHENE	--	--	0.29 U	0.29 U	0.29 U	0.29 U	16 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	--	--	0.13 U	0.13 U	0.13 U	0.13 U	7.2 U
TOTAL XYLENES	--	--	0.28 U	0.28 U	0.28 U	0.28 U	16 U
TRANS-1,2-DICHLOROETHENE	--	--	0.19 U	0.19 U	0.19 U	0.19 U	11 U
TRANS-1,3-DICHLOROPROPENE	--	--	0.19 U	0.19 U	0.19 U	0.19 U	11 U
TRICHLOROETHENE	--	--	0.17 U	0.17 U	6.3	0.17 U	1500
TRICHLOROFLUOROMETHANE	--	--	0.21 U	0.21 U	0.21 UJ	0.21 UJ	12 U
VINYL ACETATE	--	--	0.19 UR	0.19 U	0.19 U	0.19 U	11 UR
VINYL CHLORIDE	--	--	0.22 U	0.22 U	1.5	0.22 U	12 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	0.1 U
ETHENE	--	--	--	--	--	--	1.3
METHANE	--	--	--	--	--	--	53
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	1.6	4.9	0.5 U	1.2	4.7	0.49 U	170
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	EXT-MW06	MRC-MW07A	MRC-MW08A	MRC-MW10A	MRC-MW11A	MRC-MW11C	MRC-MW12A
SAMPLE ID	MRC-EXT06-040813	MRC-MW-07A-042513	MRC-MW08A-040513	MRC-MW10A-042413	MRC-MW-11A-040913	MRC-MW11C-042413	MRC-MW12A-040213
SAMPLE DATE	4/8/2013	4/25/2013	4/5/2013	4/24/2013	4/9/2013	4/24/2013	4/2/2013
METALS (UG/L)							
ANTIMONY	--	0.42 B	0.3 U	0.3 U	1.2 B	--	0.3 U
ARSENIC	--	0.9 U	1.8 J	2.7 J	0.94 J	--	0.9 U
BARIUM	--	65	170	93	41	--	69
BERYLLIUM	--	1.6	1.8	0.12 J	0.1 U	--	0.57 J
CADMIUM	--	1.1	0.1 U	0.1 U	0.36 J	--	0.1 U
CALCIUM	--	--	--	--	--	--	7200
CHROMIUM	--	1.6 J	0.9 U	0.9 U	0.9 U	--	0.9 U
COBALT	--	220	89	82	50	--	44
COPPER	--	57	2.3	1.6 J	1.1 B	--	1.1 B
IRON	--	--	--	--	--	--	33000
LEAD	--	4.9	0.93 J	0.63 J	0.5 J	--	0.48 J
MAGNESIUM	--	--	--	--	--	--	5800
MANGANESE	--	--	--	--	--	--	1900
MERCURY	--	0.1 U	0.13 B	0.1 U	0.1 U	--	0.12 U
MOLYBDENUM	--	0.2 U	0.5 J	0.2 U	1 B	--	0.2 U
NICKEL	--	410	180	23	13	--	78
POTASSIUM	--	--	--	--	--	--	1900 J
SELENIUM	--	1.3 J	0.5 U	0.5 U	0.5 U	--	0.5 U
SILICON DIOXIDE	--	--	--	--	--	--	16000
SILVER	--	0.1 U	0.1 U	0.1 U	0.13 B	--	0.1 U
SODIUM	--	--	--	--	--	--	9900
THALLIUM	--	0.2 U	0.2 U	0.2 U	0.2 J	--	0.2 U
VANADIUM	--	0.8 U	0.8 U	2 J	1.6 J	--	0.8 U
ZINC	--	120	66 K	65	250	--	150
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	14
AMMONIA-N (MG/L)	--	--	--	--	--	--	0.069 J
CHLORIDE (MG/L)	--	--	--	--	--	--	47
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	1.7
NITRATE-N (MG/L)	--	--	--	--	--	--	0.023 U
NITRITE-N (MG/L)	--	--	--	--	--	--	0.012 U
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	0.34 J
SULFATE (MG/L)	--	--	--	--	--	--	1.6
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	120
PERCHLORATE (UG/L)	--	--	0.082 U	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW12B	MRC-MW12C	MRC-MW13A	MRC-MW14A	MRC-MW14B	MRC-MW14C	MRC-MW15A
SAMPLE ID	MRC-MW12B-040313	MRC-MW12C-040213	MRC-MW13A-040213	MRC-MW14A-040113	MRC-MW14B-040113	MRC-MW14C-040213	MRC-MW-15A-040913
SAMPLE DATE	4/3/2013	4/2/2013	4/2/2013	4/1/2013	4/1/2013	4/2/2013	4/9/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	2.3 U	0.23 U	0.23 U	0.23 U	23 U	0.23 U	--
1,1,1-TRICHLOROETHANE	2.2 U	0.22 U	0.22 U	0.22 U	22 U	0.22 U	--
1,1,2,2-TETRACHLOROETHANE	1.8 U	0.18 U	0.18 U	0.18 U	18 U	0.18 U	--
1,1,2-TRICHLOROTRIFLUOROETHANE	2.8 U	0.28 U	0.28 U	0.28 U	28 U	0.28 U	--
1,1-DICHLOROETHANE	3.1 J	0.15 U	0.15 U	0.32 J	45 J	0.15 U	--
1,1-DICHLOROETHENE	25	0.19 U	0.19 U	0.35 J	540	0.19 U	--
1,1-DICHLOROPROPENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
1,2,3-TRICHLOROBENZENE	1.7 U	0.17 U	0.17 U	0.17 U	17 U	0.17 U	--
1,2,3-TRICHLOROPROPANE	4.3 U	0.43 U	0.43 U	0.43 U	43 U	0.43 U	--
1,2,3-TRIMETHYLBENZENE	0.059 U	0.0059 U	0.0059 U	0.0059 U	0.59 U	0.0059 U	--
1,2,4-TRICHLOROBENZENE	1.5 U	0.15 U	0.15 U	0.15 U	15 U	0.15 U	--
1,2,4-TRIMETHYLBENZENE	1.2 U	0.12 U	0.12 U	0.12 U	12 U	0.12 U	--
1,2-DIBROMO-3-CHLOROPROPANE	6.7 U	0.67 U	0.67 U	0.67 U	67 U	0.67 U	--
1,2-DIBROMOETHANE	2.4 U	0.24 U	0.24 U	0.24 U	24 U	0.24 U	--
1,2-DICHLOROBENZENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
1,2-DICHLOROETHANE	2.2 U	0.22 U	0.22 U	0.22 U	22 U	0.22 U	--
1,2-DICHLOROPROPANE	1.8 U	0.18 U	0.18 U	0.18 U	18 U	0.18 U	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	1.4 U	0.14 U	0.14 U	0.14 U	14 U	0.14 U	--
1,3-DICHLOROPROPANE	1.6 U	0.16 U	0.16 U	0.16 U	16 U	0.16 U	--
1,4-DICHLOROBENZENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
2-BUTANONE	5.7 U	0.57 U	0.57 U	0.57 U	57 U	0.57 U	--
2-CHLOROETHYL VINYL ETHER	9.9 U	0.99 U	0.99 U	0.99 U	99 U	0.99 U	--
2-CHLOROTOLUENE	1.1 U	0.11 U	0.11 U	0.11 U	11 U	0.11 U	--
2-HEXANONE	4.1 U	0.41 U	0.41 U	0.41 U	41 U	0.41 U	--
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	1.8 U	0.18 U	0.18 U	0.18 U	18 U	0.18 U	--
4-ISOPROPYLTOLUENE	1.2 U	0.12 U	0.12 U	0.12 U	12 U	0.12 U	--
4-METHYL-2-PENTANONE	3.2 U	0.32 U	0.32 U	0.32 U	32 U	0.32 U	--
ACETONE	11 J	1.1 U	1.1 U	1.1 U	110 U	1.1 U	--
BENZENE	3 J	0.13 U	0.13 U	0.13 U	36 J	0.13 U	--
BROMOBENZENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
BROMOCHLOROMETHANE	2.9 U	0.29 U	0.29 U	0.29 U	29 U	0.29 U	--
BROMODICHLOROMETHANE	1.5 U	0.15 U	0.15 U	0.15 U	15 U	0.15 U	--
BROMOFORM	6.4 U	0.64 U	0.64 U	0.64 U	64 U	0.64 U	--
BROMOMETHANE	4.1 U	0.41 U	0.41 U	0.41 U	41 U	0.41 U	--
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
CARBON TETRACHLORIDE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
CHLOROBENZENE	1.5 U	0.15 U	0.15 U	0.15 U	15 U	0.15 U	--
CHLORODIBROMOMETHANE	1.8 U	0.18 U	0.18 U	0.18 U	18 U	0.18 U	--
CHLOROETHANE	2.9 U	0.29 U	0.29 U	0.29 U	29 U	0.29 U	--
CHLOROFORM	1.6 U	0.16 U	0.16 U	0.16 U	16 U	0.16 U	--
CHLOROMETHANE	3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	--
CIS-1,2-DICHLOROETHENE	18	0.17 U	0.18 J	1.9	54 J	0.17 U	--
CIS-1,3-DICHLOROPROPENE	1.4 U	0.14 U	0.14 U	0.14 U	14 U	0.14 U	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW12B	MRC-MW12C	MRC-MW13A	MRC-MW14A	MRC-MW14B	MRC-MW14C	MRC-MW15A
SAMPLE ID	MRC-MW12B-040313	MRC-MW12C-040213	MRC-MW13A-040213	MRC-MW14A-040113	MRC-MW14B-040113	MRC-MW14C-040213	MRC-MW-15A-040913
SAMPLE DATE	4/3/2013	4/2/2013	4/2/2013	4/1/2013	4/1/2013	4/2/2013	4/9/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	2.8 U	0.28 U	0.28 U	0.28 U	28 U	0.28 U	--
DICHLORODIFLUOROMETHANE	3.1 UJ	0.31 U	0.31 U	0.31 U	31 U	0.31 U	--
DIISOPROPYL ETHER	15 U	1.5 U	1.5 U	1.5 U	150 U	1.5 U	--
ETHYL TERT-BUTYL ETHER	1.1 U	0.11 U	0.11 U	0.11 U	11 U	0.11 U	--
ETHYLBENZENE	1.7 U	0.17 U	0.17 U	0.17 U	17 U	0.17 U	--
HEXACHLOROBUTADIENE	3 U	0.3 U	0.3 U	0.3 U	30 U	0.3 U	--
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
M+P-XYLENES	2.4 U	0.24 U	0.24 U	0.24 U	24 U	0.24 U	--
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	1.7 U	0.17 U	0.17 U	0.17 U	17 U	0.17 U	--
METHYLENE CHLORIDE	5.4 J	0.33 U	0.33 U	0.33 U	33 U	0.33 U	--
NAPHTHALENE	2.4 U	0.24 U	0.24 U	0.24 U	24 U	0.24 U	--
N-BUTYLBENZENE	1.2 U	0.12 U	0.12 U	0.12 U	12 U	0.12 U	--
N-PROPYLBENZENE	1.4 U	0.14 U	0.14 U	0.14 U	14 U	0.14 U	--
O-XYLENE	1.4 U	0.14 U	0.14 U	0.14 U	14 U	0.14 U	--
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
STYRENE	1.1 U	0.11 U	0.11 U	0.11 U	11 U	0.11 U	--
TERT-AMYL METHYL ETHER	0.67 U	0.067 U	0.067 U	0.067 U	6.7 U	0.067 U	--
TERT-BUTYLBENZENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
TERTIARY-BUTYL ALCOHOL	39 UR	3.9 UR	3.9 UR	3.9 UR	390 UR	3.9 UR	--
TETRACHLOROETHENE	2.9 U	0.29 U	0.29 U	0.29 U	29 U	0.29 U	--
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	1.3 U	0.13 U	0.13 U	0.13 U	13 U	0.13 U	--
TOTAL XYLENES	2.8 U	0.28 U	0.28 U	0.28 U	28 U	0.28 U	--
TRANS-1,2-DICHLOROETHENE	1.9 U	0.19 U	0.19 U	0.19 U	19 U	0.19 U	--
TRANS-1,3-DICHLOROPROPENE	1.9 U	0.19 U	0.19 U	0.19 U	19 U	0.19 U	--
TRICHLOROETHENE	240	0.17 J	0.17 U	1.1	2300	0.17 U	--
TRICHLOROFLUOROMETHANE	2.1 UJ	0.21 U	0.21 U	0.21 U	21 U	0.21 U	--
VINYL ACETATE	1.9 U	0.19 UR	0.19 UR	0.19 UR	19 UR	0.19 UR	--
VINYL CHLORIDE	2.2 U	0.22 U	0.22 U	0.22 U	22 U	0.22 U	--
VOLATILE GASES (UG/L)							
ETHANE	0.1 U	--	--	--	0.1 U	--	--
ETHENE	0.37 U	--	--	--	0.37 U	--	--
METHANE	0.77	--	--	--	35	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	24	0.47 U	0.49 U	0.49 U	270	0.49 U	11
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW12B	MRC-MW12C	MRC-MW13A	MRC-MW14A	MRC-MW14B	MRC-MW14C	MRC-MW15A
SAMPLE ID	MRC-MW12B-040313	MRC-MW12C-040213	MRC-MW13A-040213	MRC-MW14A-040113	MRC-MW14B-040113	MRC-MW14C-040213	MRC-MW-15A-040913
SAMPLE DATE	4/3/2013	4/2/2013	4/2/2013	4/1/2013	4/1/2013	4/2/2013	4/9/2013
METALS (UG/L)							
ANTIMONY	0.3 U	--	--	0.38 J	0.6 U	0.32 B	0.4 B
ARSENIC	0.9 U	--	--	0.9 U	1.8 U	0.9 U	0.9 U
BARIUM	76	--	--	55 J	130 J	59	170
BERYLLIUM	0.23 J	--	--	0.1 U	0.4 J	0.1 U	0.1 U
CADMIUM	0.1 U	--	--	0.1 J	0.2 U	0.1 U	0.14 J
CALCIUM	9000	--	--	--	19000	--	--
CHROMIUM	0.9 U	--	--	0.9 U	1.8 U	0.9 U	0.9 U
COBALT	8.1	--	--	17	77	5.5	35
COPPER	1.7 J	--	--	1.1 J	3.5 J	0.83 B	0.58 B
IRON	7100	--	--	--	37000	--	--
LEAD	0.28 J	--	--	0.26 J	2	0.27 J	0.23 J
MAGNESIUM	4600 J	--	--	--	8100	--	--
MANGANESE	360	--	--	--	2100	--	--
MERCURY	0.12 U	--	--	0.1 U	0.12 U	0.1 UL	0.1 U
MOLYBDENUM	0.2 U	--	--	0.23 J	0.79 J	0.71 B	0.4 B
NICKEL	23	--	--	19	130	7.3	6.1
POTASSIUM	3600 J	--	--	--	3800 J	--	--
SELENIUM	0.5 U	--	--	4.3 J	1 U	0.5 U	0.5 U
SILICON DIOXIDE	9800	--	--	--	21000	--	--
SILVER	0.1 U	--	--	0.24 J	0.58 J	0.36 B	0.12 B
SODIUM	9200	--	--	--	43000	--	--
THALLIUM	0.2 U	--	--	0.2 U	0.4 U	0.2 U	0.2 U
VANADIUM	0.8 U	--	--	0.8 U	3.9 J	0.93 J	0.8 U
ZINC	41 K	--	--	17 J	180	4 U	6.9 J
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	51 J	--	--	--	16	--	--
AMMONIA-N (MG/L)	0.13 B	--	--	--	0.32	--	--
CHLORIDE (MG/L)	7.4 K	--	--	--	120	--	--
DISSOLVED ORGANIC CARBON (MG/L)	0.56 J	--	--	--	2.1	--	--
NITRATE-N (MG/L)	0.053 J	--	--	--	0.023 U	--	--
NITRITE-N (MG/L)	0.012 U	--	--	--	0.012 UJ	--	--
ORTHOPHOSPHATE-P (MG/L)	0.044 U	--	--	--	0.044 U	--	--
SULFATE (MG/L)	3.8 K	--	--	--	74	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	87	--	--	--	330	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW16A	MRC-MW17A	MRC-MW18A	MRC-MW19A	MRC-MW20A	MRC-MW21A	MRC-MW21B
SAMPLE ID	MRC-MW-16A-040913	MRC-MW17A-042413	MRC-MW-18A-040513	MRC-MW-19A-040513	MRC-MW-20A-040513	MRC-MW-21A-042213	MRC-MW-21B-042213
SAMPLE DATE	4/9/2013	4/24/2013	4/5/2013	4/5/2013	4/5/2013	4/22/2013	4/22/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.77 U	1.5 U	--	0.23 U	--	0.23 U	4.6 U
1,1,1-TRICHLOROETHANE	0.73 U	1.5 U	--	0.22 U	--	0.22 U	4.4 U
1,1,2,2-TETRACHLOROETHANE	0.6 U	1.2 U	--	0.18 U	--	0.18 U	3.6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.93 U	1.9 U	--	0.28 U	--	0.28 U	5.6 U
1,1-DICHLOROETHANE	27	1 U	--	2.8	--	4.6	10 J
1,1-DICHLOROETHENE	70	1.3 U	--	0.19 U	--	5.9	120
1,1-DICHLOROPROPENE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
1,2,3-TRICHLOROBENZENE	0.57 U	1.1 UJ	--	0.17 U	--	0.17 U	3.4 U
1,2,3-TRICHLOROPROPANE	1.4 U	2.9 U	--	0.43 U	--	0.43 U	8.6 U
1,2,3-TRIMETHYLBENZENE	0.02 U	1.7 J	--	0.0059 U	--	0.0059 U	0.12 U
1,2,4-TRICHLOROBENZENE	0.5 U	1 UJ	--	0.15 U	--	0.15 U	3 U
1,2,4-TRIMETHYLBENZENE	0.4 U	2.4 J	--	0.12 U	--	0.12 U	2.4 U
1,2-DIBROMO-3-CHLOROPROPANE	2.2 U	4.5 U	--	0.67 U	--	0.67 U	13 U
1,2-DIBROMOETHANE	0.8 U	1.6 U	--	0.24 U	--	0.24 U	4.8 U
1,2-DICHLOROBENZENE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
1,2-DICHLOROETHANE	0.73 U	1.5 U	--	0.22 U	--	0.22 U	4.4 U
1,2-DICHLOROPROPANE	0.6 U	1.2 U	--	0.18 U	--	0.18 U	3.6 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.47 U	0.93 U	--	0.14 U	--	0.14 U	2.8 U
1,3-DICHLOROPROPANE	0.53 U	1.1 U	--	0.16 U	--	0.16 U	3.2 U
1,4-DICHLOROBENZENE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
2-BUTANONE	1.9 U	3.8 U	--	0.57 U	--	0.57 U	11 U
2-CHLOROETHYL VINYL ETHER	3.3 U	6.6 U	--	0.99 UR	--	0.99 U	20 U
2-CHLOROTOLUENE	0.37 U	0.73 U	--	0.11 U	--	0.11 U	2.2 U
2-HEXANONE	1.4 U	2.7 U	--	0.41 U	--	0.41 U	8.2 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.6 U	1.2 U	--	0.18 U	--	0.18 U	3.6 U
4-ISOPROPYLTOLUENE	0.4 U	0.8 U	--	0.12 U	--	0.12 U	2.4 U
4-METHYL-2-PENTANONE	1.1 U	2.1 U	--	0.32 U	--	0.32 U	6.4 U
ACETONE	4.7 J	7.3 U	--	1.1 U	--	1.1 J	22 U
BENZENE	1.2 B	110	--	0.13 U	--	0.13 U	23
BROMOBENZENE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
BROMOCHLOROMETHANE	0.97 U	1.9 U	--	0.29 U	--	0.29 U	5.8 U
BROMODICHLOROMETHANE	0.5 U	1 U	--	0.15 U	--	0.15 U	3 U
BROMOFORM	2.1 U	4.3 U	--	0.64 U	--	0.64 U	13 U
BROMOMETHANE	1.4 U	2.7 U	--	0.41 U	--	0.41 U	8.2 U
BUTANE	--	160 NJ	--	--	--	--	--
CARBON DISULFIDE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
CARBON TETRACHLORIDE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
CHLOROBENZENE	0.5 U	1 U	--	0.15 U	--	0.15 U	3 U
CHLORODIBROMOMETHANE	0.6 U	1.2 U	--	0.18 U	--	0.18 U	3.6 U
CHLOROETHANE	0.97 U	1.9 U	--	0.29 U	--	0.29 U	5.8 U
CHLOROFORM	0.53 U	1.1 U	--	0.68 J	--	0.16 U	3.2 U
CHLOROMETHANE	1 U	2 U	--	0.3 U	--	0.3 U	6 U
CIS-1,2-DICHLOROETHENE	10	1.8 J	--	0.17 U	--	0.55 J	5.3 J
CIS-1,3-DICHLOROPROPENE	0.47 U	0.93 U	--	0.14 U	--	0.14 U	2.8 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MRC-MW16A MRC-MW-16A-040913 4/9/2013	MRC-MW17A MRC-MW17A-042413 4/24/2013	MRC-MW18A MRC-MW-18A-040513 4/5/2013	MRC-MW19A MRC-MW-19A-040513 4/5/2013	MRC-MW20A MRC-MW-20A-040513 4/5/2013	MRC-MW21A MRC-MW-21A-042213 4/22/2013	MRC-MW21B MRC-MW-21B-042213 4/22/2013
CYCLOHEXANE	--	22 NJ	--	--	--	--	--
CYCLOHEXENE	--	17 NJ	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.93 U	1.9 U	--	0.28 U	--	0.28 U	5.6 U
DICHLORODIFLUOROMETHANE	1 U	2.1 U	--	0.31 U	--	0.31 UJ	6.2 UJ
DIISOPROPYL ETHER	5 U	10 U	--	1.5 U	--	1.5 U	30 U
ETHYL TERT-BUTYL ETHER	0.37 U	0.73 U	--	0.11 U	--	0.11 U	2.2 U
ETHYLBENZENE	0.57 U	32	--	0.17 U	--	0.17 U	3.4 U
HEXACHLOROBUTADIENE	1 U	2 UJ	--	0.3 U	--	0.3 U	6 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	32 NJ	--	--	--	--	--
ISOPROPYLBENZENE	0.43 U	1.8 J	--	0.13 U	--	0.13 U	9.4 J
M+P-XYLENES	0.8 U	12 J	--	0.24 U	--	0.24 U	4.8 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.57 U	1.1 U	--	0.17 U	--	0.17 U	3.4 U
METHYLENE CHLORIDE	1.7 B	5.1 B	--	0.33 U	--	0.33 U	6.6 U
NAPHTHALENE	0.8 U	1.6 U	--	0.24 U	--	0.24 U	4.8 U
N-BUTYLBENZENE	0.4 U	0.8 U	--	0.12 U	--	0.12 U	2.4 U
N-PROPYLBENZENE	0.47 U	3.8 J	--	0.14 U	--	0.14 U	2.8 U
O-XYLENE	0.47 U	2 J	--	0.14 U	--	0.14 U	2.8 U
PENTANE	--	15 NJ	--	--	--	--	--
SEC-BUTYLBENZENE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
STYRENE	0.37 U	0.73 U	--	0.11 U	--	0.11 U	2.2 U
TERT-AMYL METHYL ETHER	0.22 U	0.45 U	--	0.067 U	--	0.067 U	1.3 U
TERT-BUTYLBENZENE	0.43 U	0.87 U	--	0.13 U	--	0.13 U	2.6 U
TERTIARY-BUTYL ALCOHOL	13 UR	26 UR	--	3.9 UR	--	3.9 UR	78 UR
TETRACHLOROETHENE	7.1	1.9 U	--	0.29 U	--	0.5 J	5.8 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.43 U	12	--	0.13 U	--	0.13 U	2.6 U
TOTAL XYLENES	0.93 U	14	--	0.28 U	--	0.28 U	5.6 U
TRANS-1,2-DICHLOROETHENE	0.63 U	1.3 U	--	0.19 U	--	0.19 U	3.8 U
TRANS-1,3-DICHLOROPROPENE	0.63 U	1.3 U	--	0.19 U	--	0.19 U	3.8 U
TRICHLOROETHENE	21	9	--	0.17 U	--	5.3	660
TRICHLOROFLUOROMETHANE	0.7 UJ	1.4 UJ	--	1.1	--	0.21 U	4.2 U
VINYL ACETATE	0.63 U	1.3 U	--	0.19 UR	--	0.19 UR	3.8 UR
VINYL CHLORIDE	5.9	1.5 U	--	0.22 U	--	0.79 J	4.4 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	0.1 U
ETHENE	--	--	--	--	--	--	0.37 U
METHANE	--	--	--	--	--	--	11
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	30	2.1	5.2	6.6	2.4	2.7	34
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW16A	MRC-MW17A	MRC-MW18A	MRC-MW19A	MRC-MW20A	MRC-MW21A	MRC-MW21B
SAMPLE ID	MRC-MW-16A-040913	MRC-MW17A-042413	MRC-MW-18A-040513	MRC-MW-19A-040513	MRC-MW-20A-040513	MRC-MW-21A-042213	MRC-MW-21B-042213
SAMPLE DATE	4/9/2013	4/24/2013	4/5/2013	4/5/2013	4/5/2013	4/22/2013	4/22/2013
METALS (UG/L)							
ANTIMONY	0.53 B	0.3 U	0.3 U	0.3 U	0.3 U	0.6 U	0.3 U
ARSENIC	0.9 U	1.5 J	0.9 U	0.9 U	0.9 U	2.3 J	0.9 U
BARIUM	230	370	350	36	42	64	110
BERYLLIUM	7.6	0.51 J	6.4	2.6	0.45 J	0.7 J	1.2
CADMIUM	1.7	0.1 U	0.68 J	1.5	0.1 U	0.2 U	0.1 U
CALCIUM	--	--	--	--	--	--	6600
CHROMIUM	1.4 J	0.9 U	0.9 U	0.9 U	0.98 J	2.9 J	0.9 U
COBALT	260	49	130	730	48	7.1	70
COPPER	7.2	0.96 J	36	200	8.7	3.5 J	0.5 U
IRON	--	--	--	--	--	--	31000
LEAD	0.92 J	0.28 J	0.59 J	0.6 J	1.3	1.3 J	0.2 U
MAGNESIUM	--	--	--	--	--	--	6700
MANGANESE	--	--	--	--	--	--	3100
MERCURY	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MOLYBDENUM	0.34 B	0.2 U	0.2 U	0.2 U	0.2 U	0.89 B	0.2 U
NICKEL	290	52	220	1100	77	6.4	81
POTASSIUM	--	--	--	--	--	--	2600 J
SELENIUM	0.5 UL	0.5 UL	0.51 J	0.63 J	0.53 J	1 U	0.5 U
SILICON DIOXIDE	--	--	--	--	--	--	15000
SILVER	0.12 J	0.1 U	0.1 U	0.1 U	0.1 U	0.2 U	0.1 U
SODIUM	--	--	--	--	--	--	14000
THALLIUM	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4 U	0.2 U
VANADIUM	3.1 J	0.8 U	0.8 U	0.8 U	0.8 U	4.8 J	0.8 U
ZINC	500	30 K	200 K	610 K	37 K	38 J	160 K
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	36
AMMONIA-N (MG/L)	--	--	--	--	--	--	0.084 J
CHLORIDE (MG/L)	--	--	--	--	--	--	70 J
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	0.67 J
NITRATE-N (MG/L)	--	--	--	--	--	--	0.023 U
NITRITE-N (MG/L)	--	--	--	--	--	--	0.012 U
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	0.044 UL
SULFATE (MG/L)	--	--	--	--	--	--	1.9 J
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	170
PERCHLORATE (UG/L)	--	0.082 U	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW22A	MRC-MW22B	MRC-MW24A	MRC-MW25A	MRC-MW26A	MRC-MW27A	MRC-MW27B
SAMPLE ID	MRC-MW-22A-042213	MRC-MW-22B-042313	MRC-MW24A-032713	MRC-MW25A-042213	MRC-MW26A-032613	MRC-MW27A-032713	MRC-MW27B-032713
SAMPLE DATE	4/22/2013	4/23/2013	3/27/2013	4/22/2013	3/26/2013	3/27/2013	3/27/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	--	1.8 U	--	1.2 U	7.7 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	--	1.7 U	--	1.1 U	7.3 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	--	1.4 U	--	0.9 U	6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	--	2.2 U	--	1.4 U	9.3 U
1,1-DICHLOROETHANE	0.15 U	1.1	--	1.2 U	--	2.1 J	5 U
1,1-DICHLOROETHENE	0.19 U	3.4	--	1.5 U	--	2.2 J	9.8 J
1,1-DICHLOROPROPENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	--	1.3 U	--	0.85 U	5.7 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	--	3.3 U	--	2.2 U	14 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	--	0.045 U	--	0.03 U	0.2 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	--	1.2 U	--	0.75 U	5 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	--	0.92 U	--	0.6 U	4 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	--	5.2 U	--	3.4 U	22 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	--	1.8 U	--	1.2 U	8 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	--	1.7 U	--	1.1 U	7.3 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	--	1.4 U	--	0.9 U	6 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	--	1.1 U	--	0.7 U	4.7 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	--	1.2 U	--	0.8 U	5.3 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
1-PENTENE	--	--	--	--	--	6.6 NJ	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
2-BUTANONE	0.57 U	0.57 U	--	4.4 U	--	2.9 U	19 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	--	7.6 U	--	5 U	33 U
2-CHLOROTOLUENE	0.11 U	0.11 U	--	0.85 U	--	0.55 U	3.7 U
2-HEXANONE	0.41 U	0.41 U	--	3.2 U	--	2.1 U	14 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	--	1.4 U	--	0.9 U	6 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	--	0.92 U	--	0.6 U	4 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	--	2.5 U	--	1.6 U	11 U
ACETONE	1.1 U	1.1 U	--	8.5 U	--	5.5 U	39 B
BENZENE	0.13 U	0.13 U	--	1.3 J	--	1.7 B	4.3 U
BROMOBENZENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	--	2.2 U	--	1.5 U	9.7 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	--	1.2 U	--	0.75 U	5 U
BROMOFORM	0.64 U	0.64 U	--	4.9 U	--	3.2 U	21 U
BROMOMETHANE	0.41 U	0.41 U	--	3.2 U	--	2.1 U	14 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.17 J	--	1 U	--	0.65 U	4.3 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
CHLOROBENZENE	0.15 U	0.15 U	--	1.2 U	--	0.75 U	5 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	--	1.4 U	--	0.9 U	6 U
CHLOROETHANE	0.29 U	0.29 U	--	2.2 U	--	1.5 U	9.7 U
CHLOROFORM	0.16 U	0.16 U	--	1.2 U	--	0.8 U	5.3 U
CHLOROMETHANE	0.3 U	0.3 U	--	2.3 U	--	1.5 U	10 U
CIS-1,2-DICHLOROETHENE	0.17 U	0.19 J	--	9.9	--	43	310
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	--	1.1 U	--	0.7 U	4.7 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW22A	MRC-MW22B	MRC-MW24A	MRC-MW25A	MRC-MW26A	MRC-MW27A	MRC-MW27B
SAMPLE ID	MRC-MW-22A-042213	MRC-MW-22B-042313	MRC-MW24A-032713	MRC-MW25A-042213	MRC-MW26A-032613	MRC-MW27A-032713	MRC-MW27B-032713
SAMPLE DATE	4/22/2013	4/23/2013	3/27/2013	4/22/2013	3/26/2013	3/27/2013	3/27/2013
CYCLOHEXANE	--	--	--	--	--	0.75 NJ	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	--	2.2 U	--	1.4 U	9.3 U
DICHLORODIFLUOROMETHANE	0.31 UJ	0.31 U	--	2.4 UJ	--	1.6 UJ	10 UJ
DIISOPROPYL ETHER	1.5 U	1.5 U	--	12 U	--	7.5 U	50 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	--	0.85 U	--	0.55 U	3.7 U
ETHYLBENZENE	0.17 U	0.17 U	--	1.3 U	--	0.85 U	5.7 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	--	2.3 U	--	1.5 U	10 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
M+P-XYLENES	0.24 U	0.24 U	--	1.8 U	--	1.2 U	8 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	--	1.3 U	--	22	5.7 U
METHYLENE CHLORIDE	0.33 U	0.33 U	--	2.5 U	--	3.5 B	25 B
NAPHTHALENE	0.24 U	0.24 U	--	1.8 U	--	1.2 U	8 U
N-BUTYLBENZENE	0.12 U	0.12 U	--	0.92 U	--	0.6 U	4 U
N-PROPYLBENZENE	0.14 U	0.14 U	--	1.1 U	--	0.7 U	4.7 U
O-XYLENE	0.14 U	0.14 U	--	1.1 U	--	0.7 U	4.7 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
STYRENE	0.11 U	0.11 U	--	0.85 U	--	0.55 U	3.7 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	--	0.52 U	--	0.34 U	2.2 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	--	30 UR	--	20 UR	130 UR
TETRACHLOROETHENE	0.29 U	0.29 U	--	2.2 U	--	1.5 U	9.7 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	--	1 U	--	0.65 U	4.3 U
TOTAL XYLENES	0.28 U	0.28 U	--	2.2 U	--	1.4 U	9.3 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	--	1.5 U	--	0.95 U	6.3 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	--	1.5 U	--	0.95 U	6.3 U
TRICHLOROETHENE	0.59 J	1.3	--	230	--	170	1000
TRICHLOROFLUOROMETHANE	0.21 U	0.21 U	--	1.6 U	--	1.1 UJ	7 UJ
VINYL ACETATE	0.19 UR	0.19 UR	--	1.5 UR	--	0.95 U	6.3 U
VINYL CHLORIDE	0.22 U	0.22 U	--	1.7 U	--	18	12 J
VOLATILE GASES (UG/L)							
ETHANE	--	--	0.23 J	0.1 U	--	3.2	0.1 U
ETHENE	--	--	0.37 U	0.37 U	--	1.8	0.37 U
METHANE	--	--	96	11	--	1700	11
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.5 U	4.2	--	1.5	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW22A	MRC-MW22B	MRC-MW24A	MRC-MW25A	MRC-MW26A	MRC-MW27A	MRC-MW27B
SAMPLE ID	MRC-MW-22A-042213	MRC-MW-22B-042313	MRC-MW24A-032713	MRC-MW25A-042213	MRC-MW26A-032613	MRC-MW27A-032713	MRC-MW27B-032713
SAMPLE DATE	4/22/2013	4/23/2013	3/27/2013	4/22/2013	3/26/2013	3/27/2013	3/27/2013
METALS (UG/L)							
ANTIMONY	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
ARSENIC	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	3.7 J	0.9 U
BARIUM	42	130	220	180	340	540	79
BERYLLIUM	0.1 J	0.1 U	22	2.9	14	3.3	0.89 J
CADMIUM	0.1 U	0.1 U	1.2	0.13 J	0.24 J	0.1 U	0.16 J
CALCIUM	--	--	17000	23000	--	13000	18000
CHROMIUM	0.9 U	0.9 U	0.9 U	0.9 U	1.1 J	2.4	0.9 U
COBALT	32	95	120	93	320	560	150
COPPER	0.5 U	0.73 B	39	1.1 B	4 L	2.4 L	5
IRON	--	--	420	18000	--	94000	270
LEAD	0.2 U	0.2 U	0.56 J	0.3 J	0.29 J	0.79 J	0.46 J
MAGNESIUM	--	--	22000	6300	--	24000	3200 J
MANGANESE	--	--	16000	3200	--	32000	110
MERCURY	0.1 U	0.1 U	0.17 J	0.17 B	0.1 U	0.12 U	0.12 U
MOLYBDENUM	0.2 U	0.2 U	0.7 B	0.96 B	0.21 B	0.32 B	0.41 B
NICKEL	59	160	350	130	160 L	240	170
POTASSIUM	--	--	5400	2600 J	--	2900 J	7100
SELENIUM	0.5 U	0.5 U	1.3 J	0.5 U	1.4 J	0.5 UL	0.5 UL
SILICON DIOXIDE	--	--	11000	11000	--	16000	7200
SILVER	0.1 U	0.1 U	0.18 B	0.1 U	0.1 UL	0.1 UL	0.1 UL
SODIUM	--	--	210000	62000	--	260000	89000
THALLIUM	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.36 J
VANADIUM	0.8 U	0.8 U	2.2 J	0.8 J	0.8 U	2.8 J	0.8 U
ZINC	66 K	260	330 K	130 K	230	250 K	220 K
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	38	61	--	38	45
AMMONIA-N (MG/L)	--	--	0.3 B	0.047 J	--	1.9	0.2 B
CHLORIDE (MG/L)	--	--	510	140 J	--	690	170
DISSOLVED ORGANIC CARBON (MG/L)	--	--	3.5	1.5	--	2.6	2.1
NITRATE-N (MG/L)	--	--	0.11	0.023 U	--	0.023 U	0.14
NITRITE-N (MG/L)	--	--	0.012 U	0.012 U	--	0.012 U	0.012 U
ORTHOPHOSPHATE-P (MG/L)	--	--	0.044 U	0.044 UL	--	0.044 U	0.044 U
SULFATE (MG/L)	--	--	2.9	2.4 J	--	3.1	7.7
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	950	270	--	1000	310
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW27C	MRC-MW29A	MRC-MW30A	MRC-MW31A	MRC-MW32A	MRC-MW33A	MRC-MW34A
SAMPLE ID	MRC-MW27C-032713	MRC-MW29A-032613	MRC-MW30A-031513	MRC-MW31A-031513	MRC-MW32A-031513	MRC-MW33A-031513	MRC-MW34A-031513
SAMPLE DATE	3/27/2013	3/26/2013	3/15/2013	3/15/2013	3/15/2013	3/15/2013	3/15/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	--	--	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	--	--	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	--	--	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	--	--	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	0.15 U	5.1	--	--	0.15 U	0.25 J	0.15 U
1,1-DICHLOROETHENE	0.19 U	3	--	--	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	--	--	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	--	--	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	--	--	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	--	--	0.15 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	--	--	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	--	--	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	--	--	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	--	--	0.22 U	0.22 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	--	--	0.18 U	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	--	--	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	--	--	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
2-BUTANONE	0.57 U	0.57 U	--	--	0.57 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	--	--	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	0.11 U	0.11 U	--	--	0.11 U	0.11 U	0.11 U
2-HEXANONE	0.41 U	0.41 U	--	--	0.41 U	0.41 U	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	--	--	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	--	--	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	--	--	0.32 U	0.32 U	0.32 U
ACETONE	1.1 U	2.3 B	--	--	1.1 U	1.1 U	1.1 U
BENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
BROMOBENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	--	--	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	--	--	0.15 U	0.15 U	0.15 U
BROMOFORM	0.64 U	0.64 U	--	--	0.64 U	0.64 U	0.64 U
BROMOMETHANE	0.41 U	0.41 U	--	--	0.41 U	0.41 U	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	--	--	0.15 U	0.15 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	--	--	0.18 U	0.18 U	0.18 U
CHLOROETHANE	0.29 U	0.29 U	--	--	0.29 U	0.29 U	0.29 U
CHLOROFORM	0.16 U	0.16 U	--	--	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	--	--	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	3.9	--	--	0.17 U	2.4	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	--	--	0.14 U	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW27C	MRC-MW29A	MRC-MW30A	MRC-MW31A	MRC-MW32A	MRC-MW33A	MRC-MW34A
SAMPLE ID	MRC-MW27C-032713	MRC-MW29A-032613	MRC-MW30A-031513	MRC-MW31A-031513	MRC-MW32A-031513	MRC-MW33A-031513	MRC-MW34A-031513
SAMPLE DATE	3/27/2013	3/26/2013	3/15/2013	3/15/2013	3/15/2013	3/15/2013	3/15/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	--	--	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 UJ	0.31 UJ	--	--	0.31 UJ	0.31 UJ	0.31 UJ
DIISOPROPYL ETHER	1.5 U	1.5 U	--	--	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	--	--	0.11 U	0.11 U	0.11 U
ETHYLBENZENE	0.17 U	0.17 U	--	--	0.17 U	0.17 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	--	--	0.3 UJ	0.3 UJ	0.3 UJ
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
M+P-XYLENES	0.24 U	0.24 U	--	--	0.24 U	0.24 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	5 J	--	--	0.17 U	3.8	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	--	--	0.33 U	0.33 U	0.33 U
NAPHTHALENE	0.24 U	0.24 U	--	--	0.24 U	0.24 U	0.24 U
N-BUTYLBENZENE	0.12 U	0.12 U	--	--	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	--	--	0.14 U	0.14 U	0.14 U
O-XYLENE	0.14 U	0.14 U	--	--	0.14 U	0.14 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
STYRENE	0.11 U	0.11 U	--	--	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	--	--	0.067 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	5.9 J	--	--	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	--	--	0.29 U	0.29 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	--	--	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	--	--	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	--	--	0.19 U	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	--	--	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	0.17 U	10	--	--	0.62 J	2.8	20
TRICHLOROFLUOROMETHANE	0.21 UJ	0.21 U	--	--	0.21 UJ	0.21 UJ	0.21 UJ
VINYL ACETATE	0.19 U	0.19 UR	--	--	0.19 U	0.19 U	0.19 U
VINYL CHLORIDE	0.22 U	0.59 J	--	--	0.22 U	0.22 U	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW27C	MRC-MW29A	MRC-MW30A	MRC-MW31A	MRC-MW32A	MRC-MW33A	MRC-MW34A
SAMPLE ID	MRC-MW27C-032713	MRC-MW29A-032613	MRC-MW30A-031513	MRC-MW31A-031513	MRC-MW32A-031513	MRC-MW33A-031513	MRC-MW34A-031513
SAMPLE DATE	3/27/2013	3/26/2013	3/15/2013	3/15/2013	3/15/2013	3/15/2013	3/15/2013
METALS (UG/L)							
ANTIMONY	--	0.3 U	2.3	0.3 U	--	0.3 U	--
ARSENIC	--	0.9 U	0.9 U	0.9 U	--	0.9 U	--
BARIUM	--	320	46	93	--	43	--
BERYLLIUM	--	8.7	0.22 J	5.1	--	8.5	--
CADMIUM	--	0.83 J	0.13 J	0.1 U	--	0.47 J	--
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	1.6 J	2.5	0.9 U	--	1.3 J	--
COBALT	--	330	18	45	--	74	--
COPPER	--	12 L	3.7 B	22	--	9.1	--
IRON	--	--	--	--	--	--	--
LEAD	--	0.36 J	0.44 J	0.36 J	--	0.37 J	--
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	0.15 J	0.1 U	0.1 U	--	0.1 U	--
MOLYBDENUM	--	0.45 B	1.4 J	0.2 U	--	0.29 J	--
NICKEL	--	160 L	8.8	83	--	57	--
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	0.95 J	2 J	0.5 U	--	0.5 U	--
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	--	0.1 UL	0.14 J	0.1 U	--	0.1 U	--
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	0.2 U	0.2 U	0.2 U	--	0.2 U	--
VANADIUM	--	1.3 J	13 J	0.8 U	--	0.8 J	--
ZINC	--	270	13 J	74	--	160	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW34B	MRC-MW34C	MRC-MW37A	MRC-MW37B	MRC-MW37C	MRC-MW38A	MRC-MW38B
SAMPLE ID	MRC-MW34B-032113	MRC-MW34C-032113	MRC-MW37A-032613	MRC-MW37B-032113	MRC-MW37C-032113	MRC-MW-38A-032013	MRC-MW-38B-032013
SAMPLE DATE	3/21/2013	3/21/2013	3/26/2013	3/21/2013	3/21/2013	3/20/2013	3/20/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.58 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.45 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	0.7 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	0.77 J	0.15 U	0.38 U	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	0.29 J	0.19 U	0.48 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 UJ	0.43 U	0.17 UJ	0.17 UJ	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	1.1 U	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.015 U	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	0.38 U	0.15 UJ	0.15 UJ	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.3 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	1.7 U	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.6 U	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.45 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.35 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.4 U	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 UJ	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	0.57 U	0.57 U	1.4 U	0.57 UJ	0.57 UJ	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	2.5 U	0.99 UJ	0.99 UJ	0.99 U	0.99 U
2-CHLOROTOLUENE	0.11 U	0.11 U	0.28 U	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	0.41 UJ	0.41 UJ	1 U	0.41 UJ	0.41 UJ	0.41 U	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.45 U	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.3 U	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	0.8 U	0.32 UJ	0.32 UJ	0.32 U	0.32 U
ACETONE	1.1 UJ	1.1 UJ	2.8 U	1.1 U	1.1 U	1.1 U	1.1 U
BENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
BROMOBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.38 U	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	0.64 U	0.64 U	1.6 U	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	0.41 UJ	0.41 U	1 U	0.41 U	0.41 U	0.41 U	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	6.3	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	0.38 U	0.15 U	0.15 U	0.15 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.45 U	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	0.29 U	0.29 U	0.73 U	0.29 U	0.29 U	0.29 U	0.29 U
CHLOROFORM	1.8	0.16 U	0.4 U	0.16 U	0.16 U	4.3	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	0.75 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	18	0.17 U	1.4 J	3.7	0.17 U	0.17 U	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.35 U	0.14 U	0.14 U	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MRC-MW34B MRC-MW34B-032113 3/21/2013	MRC-MW34C MRC-MW34C-032113 3/21/2013	MRC-MW37A MRC-MW37A-032613 3/26/2013	MRC-MW37B MRC-MW37B-032113 3/21/2013	MRC-MW37C MRC-MW37C-032113 3/21/2013	MRC-MW38A MRC-MW-38A-032013 3/20/2013	MRC-MW38B MRC-MW-38B-032013 3/20/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.7 U	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 U	0.31 U	0.78 UJ	0.31 U	0.31 U	0.31 UJ	0.31 UJ
DIISOPROPYL ETHER	1.5 U	1.5 U	3.8 U	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	0.28 U	0.11 U	0.11 U	0.11 U	0.11 U
ETHYLBENZENE	0.17 U	0.17 U	0.43 U	0.17 U	0.17 U	0.17 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	0.75 U	0.3 U	0.3 U	0.3 U	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	0.24 U	0.24 U	0.6 U	0.24 U	0.24 U	0.24 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	21	0.17 U	0.43 U	0.17 U	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.83 U	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	0.24 U	0.24 U	0.6 U	0.24 UJ	0.24 UJ	0.24 U	0.24 U
N-BUTYLBENZENE	0.12 U	0.12 U	0.3 U	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.35 U	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	0.14 U	0.14 U	0.35 U	0.14 U	0.14 U	0.14 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	0.11 U	0.11 U	0.28 U	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.17 U	0.067 U	0.067 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	9.8 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.73 U	0.29 U	0.29 U	0.29 U	0.42 J
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.33 U	0.13 U	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	0.7 U	0.28 U	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	0.48 U	0.19 U	0.19 U	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.48 U	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	19	0.17 U	78	21	0.46 J	0.17 U	0.23 J
TRICHLOROFLUOROMETHANE	0.21 U	0.21 U	0.53 U	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ
VINYL ACETATE	0.19 UR	0.19 UR	0.48 UR	0.19 UR	0.19 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	2.7	0.22 U	0.55 U	0.22 U	0.22 U	0.22 U	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	0.22 J	--	0.1 U	0.1 U	--	--	--
ETHENE	0.37 U	--	0.37 U	0.37 U	--	--	--
METHANE	49	--	0.12 B	0.35 J	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW34B	MRC-MW34C	MRC-MW37A	MRC-MW37B	MRC-MW37C	MRC-MW38A	MRC-MW38B
SAMPLE ID	MRC-MW34B-032113	MRC-MW34C-032113	MRC-MW37A-032613	MRC-MW37B-032113	MRC-MW37C-032113	MRC-MW-38A-032013	MRC-MW-38B-032013
SAMPLE DATE	3/21/2013	3/21/2013	3/26/2013	3/21/2013	3/21/2013	3/20/2013	3/20/2013
METALS (UG/L)							
ANTIMONY	0.3 U	--	0.3 U	--	--	--	--
ARSENIC	0.9 U	--	0.9 U	--	--	--	--
BARIUM	160	--	45	--	--	--	--
BERYLLIUM	11	--	0.43 J	--	--	--	--
CADMIUM	0.39 J	--	0.1 U	--	--	--	--
CALCIUM	13000	--	43000	18000	--	--	--
CHROMIUM	0.9 U	--	0.9 U	--	--	--	--
COBALT	110	--	3.2	--	--	--	--
COPPER	30	--	0.54 J	--	--	--	--
IRON	290	--	510	390	--	--	--
LEAD	0.26 J	--	0.45 J	--	--	--	--
MAGNESIUM	12000	--	8400	3900 J	--	--	--
MANGANESE	420	--	33	37	--	--	--
MERCURY	0.1 UL	--	0.12 U	--	--	--	--
MOLYBDENUM	0.72 B	--	0.2 U	--	--	--	--
NICKEL	150	--	1.9 J	--	--	--	--
POTASSIUM	6400	--	5100	3100 J	--	--	--
SELENIUM	0.79 J	--	0.58 J	--	--	--	--
SILICON DIOXIDE	9100	--	6400	10000	--	--	--
SILVER	0.32 B	--	0.1 UL	--	--	--	--
SODIUM	71000	--	17000	12000	--	--	--
THALLIUM	0.36 J	--	0.2 U	--	--	--	--
VANADIUM	0.83 J	--	0.8 U	--	--	--	--
ZINC	310 K	--	6.4 J	--	--	--	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	3.5 J	--	33	42	--	--	--
AMMONIA-N (MG/L)	0.083 B	--	0.066 B	0.038 B	--	--	--
CHLORIDE (MG/L)	160	--	73 K	20	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	1.6	--	2.9	3.8	--	--	--
NITRATE-N (MG/L)	0.37	--	0.95	0.61	--	--	--
NITRITE-N (MG/L)	0.012 U	--	0.012 U	0.012 U	--	--	--
ORTHOPHOSPHATE-P (MG/L)	0.044 U	--	0.044 U	0.044 U	--	--	--
SULFATE (MG/L)	18	--	63	21	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	540	--	230	110	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW41A	MRC-MW42A	MRC-MW43A	MRC-MW44A	MRC-MW46A	MRC-MW48A	MRC-MW49A
SAMPLE ID	MRC-MW41A-042913	MRC-MW42A-041813	MRC-MW43A-031813	MRC-MW44A-031813	MRC-MW-46A-042413	MRC-MW-48A-042913	MRC-MW-49A-042413
SAMPLE DATE	4/29/2013	4/18/2013	3/18/2013	3/18/2013	4/24/2013	4/29/2013	4/24/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	--	--	--	--	5.8 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	--	--	--	--	5.5 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	--	--	--	--	4.5 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	--	--	--	--	7 U	0.28 U
1,1-DICHLOROETHANE	0.15 U	--	--	--	--	3.8 U	0.15 U
1,1-DICHLOROETHENE	0.19 U	--	--	--	--	4.8 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	--	--	--	--	3.3 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	--	--	--	--	4.3 U	0.17 UJ
1,2,3-TRICHLOROPROPANE	0.43 U	--	--	--	--	11 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	--	--	--	--	0.15 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	--	--	--	--	3.8 U	0.15 UJ
1,2,4-TRIMETHYLBENZENE	0.12 U	--	--	--	--	3 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	--	--	--	--	17 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	--	--	--	--	6 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	--	--	--	--	3.3 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	--	--	--	--	5.5 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	--	--	--	--	4.5 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	--	--	--	--	3.5 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	--	--	--	--	4 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	--	--	--	--	3.3 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	--	--	--	--	3.3 U	0.13 U
2-BUTANONE	0.57 U	--	--	--	--	14 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	--	--	--	--	25 U	0.99 U
2-CHLOROTOLUENE	0.11 U	--	--	--	--	2.8 U	0.11 U
2-HEXANONE	0.41 U	--	--	--	--	10 U	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	--	--	--	--	4.5 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	--	--	--	--	3 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	--	--	--	--	8 U	0.32 U
ACETONE	1.1 UR	--	--	--	--	28 UR	1.1 U
BENZENE	0.13 U	--	--	--	--	3.3 U	0.21 B
BROMOBENZENE	0.13 U	--	--	--	--	3.3 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	--	--	--	--	7.3 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	--	--	--	--	3.8 U	0.15 U
BROMOFORM	0.64 U	--	--	--	--	16 U	0.64 U
BROMOMETHANE	0.41 U	--	--	--	--	10 U	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	--	--	--	--	3.3 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	--	--	--	--	3.3 U	0.13 U
CHLOROBENZENE	0.15 U	--	--	--	--	3.8 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	--	--	--	--	4.5 U	0.18 U
CHLOROETHANE	0.29 U	--	--	--	--	7.3 U	0.29 U
CHLOROFORM	0.16 U	--	--	--	--	4 U	0.16 U
CHLOROMETHANE	0.3 U	--	--	--	--	7.5 U	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	--	--	--	--	590	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	--	--	--	--	3.5 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MRC-MW41A MRC-MW41A-042913 4/29/2013	MRC-MW42A MRC-MW42A-041813 4/18/2013	MRC-MW43A MRC-MW43A-031813 3/18/2013	MRC-MW44A MRC-MW44A-031813 3/18/2013	MRC-MW46A MRC-MW-46A-042413 4/24/2013	MRC-MW48A MRC-MW-48A-042913 4/29/2013	MRC-MW49A MRC-MW-49A-042413 4/24/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	--	--	--	--	7 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 U	--	--	--	--	7.8 U	0.31 U
DIISOPROPYL ETHER	1.5 U	--	--	--	--	38 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	--	--	--	--	2.8 U	0.11 U
ETHYLBENZENE	0.17 U	--	--	--	--	4.3 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	--	--	--	--	7.5 U	0.3 UJ
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	--	--	--	--	3.3 U	0.13 U
M+P-XYLENES	0.24 U	--	--	--	--	6 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	--	--	--	--	4.3 U	0.17 U
METHYLENE CHLORIDE	0.33 U	--	--	--	--	19 J	0.33 U
NAPHTHALENE	0.24 U	--	--	--	--	6 U	0.24 U
N-BUTYLBENZENE	0.12 U	--	--	--	--	3 U	0.12 U
N-PROPYLBENZENE	0.14 U	--	--	--	--	3.5 U	0.14 U
O-XYLENE	0.14 U	--	--	--	--	3.5 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	--	--	--	--	3.3 U	0.13 U
STYRENE	0.11 U	--	--	--	--	2.8 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	--	--	--	--	1.7 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	--	--	--	--	3.3 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	--	--	--	--	98 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	--	--	--	--	7.3 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	--	--	--	--	3.3 U	0.13 U
TOTAL XYLENES	0.28 U	--	--	--	--	7 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	--	--	--	--	4.9 J	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	--	--	--	--	4.8 U	0.19 U
TRICHLOROETHENE	0.17 U	--	--	--	--	700	0.33 J
TRICHLOROFLUOROMETHANE	0.21 U	--	--	--	--	5.3 U	0.21 UJ
VINYL ACETATE	0.19 U	--	--	--	--	4.8 U	0.19 U
VINYL CHLORIDE	0.22 U	--	--	--	--	56	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	31	--
ETHENE	--	--	--	--	--	13	--
METHANE	--	--	--	--	--	4800	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.49 U	--	--	2.4	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	0.17 U	0.16 U	--	--	--
AROCLOR-1221	--	--	0.13 U	0.12 U	--	--	--
AROCLOR-1232	--	--	0.16 U	0.15 U	--	--	--
AROCLOR-1242	--	--	0.22 U	0.21 U	--	--	--
AROCLOR-1248	--	--	0.098 U	0.095 U	--	--	--
AROCLOR-1254	--	--	0.16 U	0.15 U	--	--	--
AROCLOR-1260	--	--	0.17 U	0.16 U	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW41A	MRC-MW42A	MRC-MW43A	MRC-MW44A	MRC-MW46A	MRC-MW48A	MRC-MW49A
SAMPLE ID	MRC-MW41A-042913	MRC-MW42A-041813	MRC-MW43A-031813	MRC-MW44A-031813	MRC-MW-46A-042413	MRC-MW-48A-042913	MRC-MW-49A-042413
SAMPLE DATE	4/29/2013	4/18/2013	3/18/2013	3/18/2013	4/24/2013	4/29/2013	4/24/2013
METALS (UG/L)							
ANTIMONY	0.3 U	0.6 U	--	--	6.2	0.3 U	0.3 U
ARSENIC	0.98 J	1.8 U	--	--	0.9 U	0.9 U	0.9 U
BARIUM	610	630	--	--	160	160	310
BERYLLIUM	1	20	--	--	0.21 J	3.1	18
CADMIUM	0.1 U	0.22 J	--	--	0.12 J	0.1 U	2.1
CALCIUM	--	--	--	--	--	1600 J	--
CHROMIUM	0.9 U	2.2 J	--	--	0.9 U	0.9 U	4.5
COBALT	550	290	--	--	2.4	100	720
COPPER	1.2 J	5	--	--	11	0.5 U	60
IRON	--	--	--	--	--	31000	--
LEAD	0.53 J	1.1 J	--	--	0.61 J	0.2 U	1.1
MAGNESIUM	--	--	--	--	--	11000	--
MANGANESE	--	--	--	--	--	9700	--
MERCURY	0.1 UL	0.1 U	--	--	0.1 U	0.12 UL	0.1 U
MOLYBDENUM	0.26 J	0.4 U	--	--	1.9 J	0.2 U	0.2 U
NICKEL	400	370	--	--	10	63	1300
POTASSIUM	--	--	--	--	--	420 J	--
SELENIUM	0.5 UL	1.5 J	--	--	0.77 J	0.5 UL	2.5 J
SILICON DIOXIDE	--	--	--	--	--	12000	--
SILVER	0.1 U	0.2 U	--	--	0.1 U	0.1 U	0.78 J
SODIUM	--	--	--	--	--	28000	--
THALLIUM	0.2 U	0.4 U	--	--	0.2 U	0.2 U	0.8 J
VANADIUM	0.8 U	1.6 U	--	--	2.4 J	0.8 U	0.8 U
ZINC	39 K	410 K	--	--	300	60	1400
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	60	--
AMMONIA-N (MG/L)	--	--	--	--	--	0.046 B	--
CHLORIDE (MG/L)	--	--	--	--	--	73	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	3.8	--
NITRATE-N (MG/L)	--	--	--	--	--	0.023 U	--
NITRITE-N (MG/L)	--	--	--	--	--	0.012 U	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	0.044 UL	--
SULFATE (MG/L)	--	--	--	--	--	6.6	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	190	--
PERCHLORATE (UG/L)	0.082 U	--	--	--	--	--	1.7

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW50A	MRC-MW51A	MRC-MW52A	MRC-MW53A	MRC-MW53B	MRC-MW54A	MRC-MW56A
SAMPLE ID	MRC-MW-50A-042413	MRC-MW51A-040513	MRC-MW52A-040513	MRC-MW-53A-032613	MRC-MW-53B-032613	MRC-MW-54A-040913	MRC-MW-56A-050813
SAMPLE DATE	4/24/2013	4/5/2013	4/5/2013	3/26/2013	3/26/2013	4/9/2013	5/8/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	--	--	0.23 U	1.3 U	--	--
1,1,1-TRICHLOROETHANE	0.22 U	--	--	0.22 U	1.3 U	--	--
1,1,2,2-TETRACHLOROETHANE	0.18 U	--	--	0.18 U	1 U	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	--	--	0.28 U	1.6 U	--	--
1,1-DICHLOROETHANE	0.15 U	--	--	0.15 U	0.86 U	--	--
1,1-DICHLOROETHENE	0.19 U	--	--	0.19 U	9	--	--
1,1-DICHLOROPROPENE	0.13 U	--	--	0.13 U	0.74 U	--	--
1,2,3-TRICHLOROBENZENE	0.17 UJ	--	--	0.17 U	0.97 U	--	--
1,2,3-TRICHLOROPROPANE	0.43 U	--	--	0.43 U	2.5 U	--	--
1,2,3-TRIMETHYLBENZENE	0.0059 U	--	--	0.0059 U	0.034 U	--	--
1,2,4-TRICHLOROBENZENE	0.15 UJ	--	--	0.15 U	0.86 U	--	--
1,2,4-TRIMETHYLBENZENE	0.17 J	--	--	0.12 U	0.69 U	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	--	--	0.67 U	3.8 U	--	--
1,2-DIBROMOETHANE	0.24 U	--	--	0.24 U	1.4 U	--	--
1,2-DICHLOROBENZENE	0.13 U	--	--	0.13 U	0.74 U	--	--
1,2-DICHLOROETHANE	0.22 U	--	--	0.22 U	1.3 U	--	--
1,2-DICHLOROPROPANE	0.18 U	--	--	0.18 U	1 U	--	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	--	--	0.14 U	0.8 U	--	--
1,3-DICHLOROPROPANE	0.16 U	--	--	0.16 U	0.91 U	--	--
1,4-DICHLOROBENZENE	0.13 U	--	--	0.13 U	0.74 U	--	--
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	--	--	0.13 U	0.74 U	--	--
2-BUTANONE	0.57 U	--	--	0.57 U	3.3 U	--	--
2-CHLOROETHYL VINYL ETHER	0.99 U	--	--	0.99 U	5.7 U	--	--
2-CHLOROTOLUENE	0.11 U	--	--	0.11 U	0.63 U	--	--
2-HEXANONE	0.41 U	--	--	0.41 U	2.3 U	--	--
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	--	--	0.18 U	1 U	--	--
4-ISOPROPYLTOLUENE	0.12 U	--	--	0.12 U	0.69 U	--	--
4-METHYL-2-PENTANONE	0.32 U	--	--	0.32 U	1.8 U	--	--
ACETONE	1.1 U	--	--	1.1 B	6.3 U	--	--
BENZENE	1.4	--	--	0.71 J	0.84 J	--	--
BROMOBENZENE	0.13 U	--	--	0.13 U	0.74 U	--	--
BROMOCHLOROMETHANE	0.29 U	--	--	0.29 U	1.7 U	--	--
BROMODICHLOROMETHANE	0.15 U	--	--	0.15 U	0.86 U	--	--
BROMOFORM	0.64 U	--	--	0.64 U	3.7 U	--	--
BROMOMETHANE	0.41 U	--	--	0.41 U	2.3 U	--	--
BUTANE	1.3 NJ	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	--	--	0.13 U	0.74 U	--	--
CARBON TETRACHLORIDE	0.13 U	--	--	0.13 U	0.74 U	--	--
CHLOROBENZENE	0.15 U	--	--	0.15 U	0.86 U	--	--
CHLORODIBROMOMETHANE	0.18 U	--	--	0.18 U	1 U	--	--
CHLOROETHANE	0.29 U	--	--	0.29 U	1.7 U	--	--
CHLOROFORM	0.16 U	--	--	0.16 U	1.1 J	--	--
CHLOROMETHANE	0.3 U	--	--	0.3 U	1.7 U	--	--
CIS-1,2-DICHLOROETHENE	0.58 J	--	--	1.4	6.3	--	--
CIS-1,3-DICHLOROPROPENE	0.14 U	--	--	0.14 U	0.8 U	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MRC-MW50A MRC-MW-50A-042413 4/24/2013	MRC-MW51A MRC-MW51A-040513 4/5/2013	MRC-MW52A MRC-MW52A-040513 4/5/2013	MRC-MW53A MRC-MW-53A-032613 3/26/2013	MRC-MW53B MRC-MW-53B-032613 3/26/2013	MRC-MW54A MRC-MW-54A-040913 4/9/2013	MRC-MW56A MRC-MW-56A-050813 5/8/2013
CYCLOHEXANE	0.25 NJ	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	2.4 NJ	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	--	--	0.28 U	1.6 U	--	--
DICHLORODIFLUOROMETHANE	0.31 U	--	--	0.31 UJ	1.8 UJ	--	--
DIISOPROPYL ETHER	1.5 U	--	--	1.5 U	8.6 U	--	--
ETHYL TERT-BUTYL ETHER	0.11 U	--	--	0.11 U	0.63 U	--	--
ETHYLBENZENE	0.28 J	--	--	0.17 U	0.97 U	--	--
HEXACHLOROBUTADIENE	0.3 UJ	--	--	0.3 U	1.7 U	--	--
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	--	--	0.13 U	0.74 U	--	--
M+P-XYLENES	0.58 J	--	--	0.24 U	1.4 U	--	--
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.43 J	--	--	1.4 J	0.97 U	--	--
METHYLENE CHLORIDE	0.33 U	--	--	0.33 U	1.9 U	--	--
NAPHTHALENE	0.24 U	--	--	0.24 U	1.4 U	--	--
N-BUTYLBENZENE	0.12 U	--	--	0.12 U	0.69 U	--	--
N-PROPYLBENZENE	0.14 U	--	--	0.14 U	0.8 U	--	--
O-XYLENE	0.21 J	--	--	0.14 U	0.8 U	--	--
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	--	--	0.13 U	0.74 U	--	--
STYRENE	0.11 U	--	--	0.11 U	0.63 U	--	--
TERT-AMYL METHYL ETHER	0.067 U	--	--	0.067 U	0.38 U	--	--
TERT-BUTYLBENZENE	0.13 U	--	--	0.13 U	0.74 U	--	--
TERTIARY-BUTYL ALCOHOL	3.9 UR	--	--	3.9 UR	22 UR	--	--
TETRACHLOROETHENE	0.29 U	--	--	0.29 U	1.7 U	--	--
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	--	--	0.13 U	0.74 U	--	--
TOTAL XYLENES	0.79 J	--	--	0.28 U	1.6 U	--	--
TRANS-1,2-DICHLOROETHENE	0.19 U	--	--	0.19 U	1.1 U	--	--
TRANS-1,3-DICHLOROPROPENE	0.19 U	--	--	0.19 U	1.1 U	--	--
TRICHLOROETHENE	18	--	--	10	210	--	--
TRICHLOROFLUOROMETHANE	0.21 UJ	--	--	0.21 U	1.2 U	--	--
VINYL ACETATE	0.19 U	--	--	0.19 UR	1.1 UR	--	--
VINYL CHLORIDE	0.22 U	--	--	0.22 U	1.3 U	--	--
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	0.47 U	10	0.47 U	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW50A	MRC-MW51A	MRC-MW52A	MRC-MW53A	MRC-MW53B	MRC-MW54A	MRC-MW56A
SAMPLE ID	MRC-MW-50A-042413	MRC-MW51A-040513	MRC-MW52A-040513	MRC-MW-53A-032613	MRC-MW-53B-032613	MRC-MW-54A-040913	MRC-MW-56A-050813
SAMPLE DATE	4/24/2013	4/5/2013	4/5/2013	3/26/2013	3/26/2013	4/9/2013	5/8/2013
METALS (UG/L)							
ANTIMONY	0.3 U	0.3 U	4	3.4	1.2 J	--	0.3 U
ARSENIC	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	--	0.9 U
BARIUM	59	100	390	200	220	--	480
BERYLLIUM	3.3	36	10	0.32 J	1.2	--	0.12 J
CADMIUM	0.15 J	0.47 J	0.79 J	0.73 J	0.22 J	--	0.1 U
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	0.9 U	0.9 U	0.9 U	1.3 J	1.9 J	--	0.9 U
COBALT	26	420	570	320	53	--	70
COPPER	7.5	11	30	10 L	4 L	--	0.58 J
IRON	--	--	--	--	--	--	--
LEAD	0.83 J	1.1	0.36 J	0.41 J	0.2 U	--	0.21 J
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	0.1 U	0.1 B	0.1 U	0.1 U	0.1 U	--	0.1 U
MOLYBDENUM	0.2 U	0.2 U	0.61 J	1.4 B	0.65 B	--	0.55 B
NICKEL	29	730	370	300 L	72 L	--	56
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	3.2 J	1.2 J	0.5 U	1.4 J	0.71 J	--	0.5 U
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	0.35 B	0.1 U	0.15 J	0.1 UL	0.1 UL	--	0.1 UL
SODIUM	--	--	--	--	--	--	--
THALLIUM	0.23 J	0.2 U	0.36 J	0.2 U	0.2 U	--	0.2 U
VANADIUM	2.1 J	0.8 U	1.9 J	2.8 J	0.8 U	--	0.8 U
ZINC	31 K	780 K	550 K	300	530	--	37
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	0.53	0.082 U	0.1 J	0.75	9.3	0.082 U	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW57A	MRC-MW58A	MRC-MW59A	MRC-MW60A	MRC-MW60B	MRC-MW61A	MRC-MW62A
SAMPLE ID	MRC-MW-57A-042313	MRC-MW-58A-042313	MRC-MW-59A-042313	MRC-MW-60A-040213	MRC-MW-60B-040213	MRC-MW61A-042213	MRC-MW62A-031813
SAMPLE DATE	4/23/2013	4/23/2013	4/23/2013	4/2/2013	4/2/2013	4/22/2013	3/18/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	--	7.7 U	38 U	--	--
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	--	7.3 U	37 U	--	--
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	--	6 U	30 U	--	--
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	--	9.3 U	47 U	--	--
1,1-DICHLOROETHANE	0.15 U	0.15 U	--	5 U	25 U	--	--
1,1-DICHLOROETHENE	0.19 U	0.19 U	--	6.3 U	32 U	--	--
1,1-DICHLOROPROPENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	--	5.7 U	28 U	--	--
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	--	14 U	72 U	--	--
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	--	0.2 U	0.98 U	--	--
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	--	5 U	25 U	--	--
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	--	4 U	20 U	--	--
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	--	22 U	110 U	--	--
1,2-DIBROMOETHANE	0.24 U	0.24 U	--	8 U	40 U	--	--
1,2-DICHLOROBENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
1,2-DICHLOROETHANE	0.22 U	0.22 U	--	7.3 U	37 U	--	--
1,2-DICHLOROPROPANE	0.18 U	0.18 U	--	6 U	30 U	--	--
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	--	4.7 U	23 U	--	--
1,3-DICHLOROPROPANE	0.16 U	0.16 U	--	5.3 U	27 U	--	--
1,4-DICHLOROBENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
2-BUTANONE	0.57 U	0.57 U	--	19 U	95 U	--	--
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	--	33 U	170 U	--	--
2-CHLOROTOLUENE	0.11 U	0.11 U	--	3.7 U	18 U	--	--
2-HEXANONE	0.41 U	0.41 U	--	14 U	68 U	--	--
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	--	6 U	30 U	--	--
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	--	4 U	20 U	--	--
4-METHYL-2-PENTANONE	0.32 U	0.32 U	--	11 U	53 U	--	--
ACETONE	1.1 U	1.1 U	--	37 U	180 U	--	--
BENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
BROMOBENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
BROMOCHLOROMETHANE	0.29 U	0.29 U	--	9.7 U	48 U	--	--
BROMODICHLOROMETHANE	0.15 U	0.15 U	--	5 U	25 U	--	--
BROMOFORM	0.64 U	0.64 U	--	21 U	110 U	--	--
BROMOMETHANE	0.41 U	0.41 U	--	14 U	68 U	--	--
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
CARBON TETRACHLORIDE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
CHLOROBENZENE	0.15 U	0.15 U	--	5 U	25 U	--	--
CHLORODIBROMOMETHANE	0.18 U	0.18 U	--	6 U	30 U	--	--
CHLOROETHANE	0.29 U	0.29 U	--	9.7 U	48 U	--	--
CHLOROFORM	0.16 U	0.16 U	--	5.3 U	27 U	--	--
CHLOROMETHANE	0.3 U	0.3 U	--	10 U	50 U	--	--
CIS-1,2-DICHLOROETHENE	0.17 U	0.17 U	--	260	150 J	--	--
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	--	4.7 U	23 U	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW57A	MRC-MW58A	MRC-MW59A	MRC-MW60A	MRC-MW60B	MRC-MW61A	MRC-MW62A
SAMPLE ID	MRC-MW-57A-042313	MRC-MW-58A-042313	MRC-MW-59A-042313	MRC-MW-60A-040213	MRC-MW-60B-040213	MRC-MW61A-042213	MRC-MW62A-031813
SAMPLE DATE	4/23/2013	4/23/2013	4/23/2013	4/2/2013	4/2/2013	4/22/2013	3/18/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	--	9.3 U	47 U	--	--
DICHLORODIFLUOROMETHANE	0.31 U	0.31 U	--	10 U	52 U	--	--
DIISOPROPYL ETHER	1.5 U	1.5 U	--	50 U	250 U	--	--
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	--	3.7 U	18 U	--	--
ETHYLBENZENE	0.17 U	0.17 U	--	5.7 U	28 U	--	--
HEXACHLOROBUTADIENE	0.3 U	0.3 U	--	10 U	50 U	--	--
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
M+P-XYLENES	0.24 U	0.24 U	--	8 U	40 U	--	--
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	--	5.7 U	28 U	--	--
METHYLENE CHLORIDE	0.33 U	0.33 U	--	18 J	82 J	--	--
NAPHTHALENE	0.24 U	0.24 U	--	8 U	40 U	--	--
N-BUTYLBENZENE	0.12 U	0.12 U	--	4 U	20 U	--	--
N-PROPYLBENZENE	0.14 U	0.14 U	--	4.7 U	23 U	--	--
O-XYLENE	0.14 U	0.14 U	--	4.7 U	23 U	--	--
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
STYRENE	0.11 U	0.11 U	--	3.7 U	18 U	--	--
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	--	2.2 U	11 U	--	--
TERT-BUTYLBENZENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	--	130 UR	650 UR	--	--
TETRACHLOROETHENE	0.29 U	0.29 U	--	13 J	48 U	--	--
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	--	4.3 U	22 U	--	--
TOTAL XYLENES	0.28 U	0.28 U	--	9.3 U	47 U	--	--
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	--	6.3 U	32 U	--	--
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	--	6.3 U	32 U	--	--
TRICHLOROETHENE	0.17 U	0.17 U	--	870	5100	--	--
TRICHLOROFLUOROMETHANE	0.21 U	0.21 U	--	7 U	35 U	--	--
VINYL ACETATE	0.19 UR	0.19 UR	--	6.3 UR	32 UR	--	--
VINYL CHLORIDE	0.22 U	0.22 U	--	35	37 U	--	--
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	0.1 U	--	--
ETHENE	--	--	--	--	0.37 U	--	--
METHANE	--	--	--	--	70	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	0.49 U	--	--	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	0.16 U
AROCLOR-1221	--	--	--	--	--	--	0.13 U
AROCLOR-1232	--	--	--	--	--	--	0.15 U
AROCLOR-1242	--	--	--	--	--	--	0.21 U
AROCLOR-1248	--	--	--	--	--	--	0.096 U
AROCLOR-1254	--	--	--	--	--	--	0.15 U
AROCLOR-1260	--	--	--	--	--	--	0.16 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW57A	MRC-MW58A	MRC-MW59A	MRC-MW60A	MRC-MW60B	MRC-MW61A	MRC-MW62A
SAMPLE ID	MRC-MW-57A-042313	MRC-MW-58A-042313	MRC-MW-59A-042313	MRC-MW-60A-040213	MRC-MW-60B-040213	MRC-MW61A-042213	MRC-MW62A-031813
SAMPLE DATE	4/23/2013	4/23/2013	4/23/2013	4/2/2013	4/2/2013	4/22/2013	3/18/2013
METALS (UG/L)							
ANTIMONY	0.3 U	--	0.3 U	0.3 U	0.3 U	0.43 J	0.3 U
ARSENIC	2.2 J	--	1.5 J	1.8 J	0.9 U	0.9 U	0.9 U
BARIUM	120	--	150	53	62	520	44
BERYLLIUM	0.41 J	--	8.2	2.2	0.39 J	4.1	6.1
CADMIUM	0.1 U	--	0.33 J	0.1 U	0.1 U	1.8	0.1 U
CALCIUM	--	--	--	--	4000 J	--	--
CHROMIUM	1 J	--	0.9 U	0.9 U	0.9 U	0.9 U	1.1 J
COBALT	580	--	810	67	41	690	22
COPPER	1.7 B	--	4.5	0.61 B	0.5 U	8.9 J	1.9 B
IRON	--	--	--	--	16000	--	--
LEAD	0.65 J	--	0.2 U	0.2 U	0.2 U	1.3	0.2 U
MAGNESIUM	--	--	--	--	5600	--	--
MANGANESE	--	--	--	--	2000	--	--
MERCURY	0.1 U	--	0.1 U	0.1 UL	0.12 U	0.1 U	0.1 U
MOLYBDENUM	1 B	--	0.28 B	0.2 U	0.2 U	1.1 B	0.41 B
NICKEL	440	--	560	70	66	320	110
POTASSIUM	--	--	--	--	2200 J	--	--
SELENIUM	0.5 U	--	0.62 J	0.5 U	0.5 U	0.5 UL	0.5 U
SILICON DIOXIDE	--	--	--	--	11000	--	--
SILVER	0.1 U	--	0.1 U	0.1 U	0.1 U	0.23 B	0.1 U
SODIUM	--	--	--	--	13000	--	--
THALLIUM	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 J	0.2 U
VANADIUM	0.8 U	--	0.8 U	0.8 U	0.8 U	0.9 J	0.8 U
ZINC	110	--	1200	49	110	370 K	89
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	57	--	--
AMMONIA-N (MG/L)	--	--	--	--	0.041 J	--	--
CHLORIDE (MG/L)	--	--	--	--	16	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	0.57 J	--	--
NITRATE-N (MG/L)	--	--	--	--	0.023 U	--	--
NITRITE-N (MG/L)	--	--	--	--	0.012 U	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	0.044 UJ	--	--
SULFATE (MG/L)	--	--	--	--	2.5	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	91	--	--
PERCHLORATE (UG/L)	--	--	--	0.082 U	0.082 U	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW62C	MRC-MW63A	MRC-MW64A	MRC-MW66A	MRC-MW67A	MRC-MW68A	MRC-MW69A
SAMPLE ID	MRC-MW62C-031813	MRC-MW63A-040313	MRC-MW-64A-042513	MRC-MW-66A-042513	MRC-MW--67A-040313	MRC-MW--68A-040313	MRC-MW-69A-040113
SAMPLE DATE	3/18/2013	4/3/2013	4/25/2013	4/25/2013	4/3/2013	4/3/2013	4/1/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	--	0.23 U	--	--	--	--	0.23 U
1,1,1-TRICHLOROETHANE	--	0.22 U	--	--	--	--	0.22 U
1,1,2,2-TETRACHLOROETHANE	--	0.18 U	--	--	--	--	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.28 U	--	--	--	--	0.28 U
1,1-DICHLOROETHANE	--	0.15 U	--	--	--	--	0.15 U
1,1-DICHLOROETHENE	--	0.19 U	--	--	--	--	0.19 U
1,1-DICHLOROPROPENE	--	0.13 U	--	--	--	--	0.13 U
1,2,3-TRICHLOROBENZENE	--	0.17 U	--	--	--	--	0.17 U
1,2,3-TRICHLOROPROPANE	--	0.43 U	--	--	--	--	0.43 U
1,2,3-TRIMETHYLBENZENE	--	0.0059 U	--	--	--	--	0.0059 U
1,2,4-TRICHLOROBENZENE	--	0.15 U	--	--	--	--	0.15 U
1,2,4-TRIMETHYLBENZENE	--	0.12 U	--	--	--	--	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	--	0.67 U	--	--	--	--	0.67 U
1,2-DIBROMOETHANE	--	0.24 U	--	--	--	--	0.24 U
1,2-DICHLOROBENZENE	--	0.13 U	--	--	--	--	0.13 U
1,2-DICHLOROETHANE	--	0.22 U	--	--	--	--	0.22 U
1,2-DICHLOROPROPANE	--	0.18 U	--	--	--	--	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	0.14 U	--	--	--	--	0.14 U
1,3-DICHLOROPROPANE	--	0.16 U	--	--	--	--	0.16 U
1,4-DICHLOROBENZENE	--	0.13 U	--	--	--	--	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	--	0.13 U	--	--	--	--	0.13 U
2-BUTANONE	--	0.57 U	--	--	--	--	0.57 U
2-CHLOROETHYL VINYL ETHER	--	0.99 U	--	--	--	--	0.99 U
2-CHLOROTOLUENE	--	0.11 U	--	--	--	--	0.11 U
2-HEXANONE	--	0.41 U	--	--	--	--	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	--	0.18 U	--	--	--	--	0.18 U
4-ISOPROPYLTOLUENE	--	0.12 U	--	--	--	--	0.12 U
4-METHYL-2-PENTANONE	--	0.32 U	--	--	--	--	0.32 U
ACETONE	--	1.1 U	--	--	--	--	1.1 U
BENZENE	--	0.27 J	--	--	--	--	0.13 U
BROMOBENZENE	--	0.13 U	--	--	--	--	0.13 U
BROMOCHLOROMETHANE	--	0.29 U	--	--	--	--	0.29 U
BROMODICHLOROMETHANE	--	0.15 U	--	--	--	--	0.15 U
BROMOFORM	--	0.64 U	--	--	--	--	0.64 U
BROMOMETHANE	--	0.41 U	--	--	--	--	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	0.13 U	--	--	--	--	0.13 U
CARBON TETRACHLORIDE	--	0.13 U	--	--	--	--	0.13 U
CHLOROBENZENE	--	0.15 U	--	--	--	--	0.15 U
CHLORODIBROMOMETHANE	--	0.18 U	--	--	--	--	0.18 U
CHLOROETHANE	--	0.29 U	--	--	--	--	0.29 U
CHLOROFORM	--	0.16 U	--	--	--	--	0.16 U
CHLOROMETHANE	--	0.3 U	--	--	--	--	0.3 U
CIS-1,2-DICHLOROETHENE	--	0.17 U	--	--	--	--	0.17 U
CIS-1,3-DICHLOROPROPENE	--	0.14 U	--	--	--	--	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW62C	MRC-MW63A	MRC-MW64A	MRC-MW66A	MRC-MW67A	MRC-MW68A	MRC-MW69A
SAMPLE ID	MRC-MW62C-031813	MRC-MW63A-040313	MRC-MW-64A-042513	MRC-MW-66A-042513	MRC-MW--67A-040313	MRC-MW--68A-040313	MRC-MW-69A-040113
SAMPLE DATE	3/18/2013	4/3/2013	4/25/2013	4/25/2013	4/3/2013	4/3/2013	4/1/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	--	0.28 U	--	--	--	--	0.28 U
DICHLORODIFLUOROMETHANE	--	0.31 UJ	--	--	--	--	0.31 U
DIISOPROPYL ETHER	--	1.5 U	--	--	--	--	1.5 U
ETHYL TERT-BUTYL ETHER	--	0.11 U	--	--	--	--	0.11 U
ETHYLBENZENE	--	0.17 U	--	--	--	--	0.17 U
HEXACHLOROBUTADIENE	--	0.3 U	--	--	--	--	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	0.13 U	--	--	--	--	0.13 U
M+P-XYLENES	--	0.24 U	--	--	--	--	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	0.17 U	--	--	--	--	0.17 U
METHYLENE CHLORIDE	--	0.33 U	--	--	--	--	0.33 U
NAPHTHALENE	--	0.24 U	--	--	--	--	0.24 U
N-BUTYLBENZENE	--	0.12 U	--	--	--	--	0.12 U
N-PROPYLBENZENE	--	0.14 U	--	--	--	--	0.14 U
O-XYLENE	--	0.14 U	--	--	--	--	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	--	0.13 U	--	--	--	--	0.13 U
STYRENE	--	0.11 U	--	--	--	--	0.11 U
TERT-AMYL METHYL ETHER	--	0.067 U	--	--	--	--	0.067 U
TERT-BUTYLBENZENE	--	0.13 U	--	--	--	--	0.13 U
TERTIARY-BUTYL ALCOHOL	--	3.9 UR	--	--	--	--	3.9 UR
TETRACHLOROETHENE	--	0.29 U	--	--	--	--	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	--	0.13 U	--	--	--	--	0.13 U
TOTAL XYLENES	--	0.28 U	--	--	--	--	0.28 U
TRANS-1,2-DICHLOROETHENE	--	0.19 U	--	--	--	--	0.19 U
TRANS-1,3-DICHLOROPROPENE	--	0.19 U	--	--	--	--	0.19 U
TRICHLOROETHENE	--	0.18 J	--	--	--	--	0.17 U
TRICHLOROFLUOROMETHANE	--	0.21 UJ	--	--	--	--	0.21 U
VINYL ACETATE	--	0.19 U	--	--	--	--	0.19 UR
VINYL CHLORIDE	--	0.22 U	--	--	--	--	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	0.47 U	--	--	--	--	1.1
PCBS (UG/L)							
AROCLOR-1016	0.17 U	--	--	--	--	--	--
AROCLOR-1221	0.13 U	--	--	--	--	--	--
AROCLOR-1232	0.16 U	--	--	--	--	--	--
AROCLOR-1242	0.22 U	--	--	--	--	--	--
AROCLOR-1248	0.098 U	--	--	--	--	--	--
AROCLOR-1254	0.16 U	--	--	--	--	--	--
AROCLOR-1260	0.17 U	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW62C	MRC-MW63A	MRC-MW64A	MRC-MW66A	MRC-MW67A	MRC-MW68A	MRC-MW69A
SAMPLE ID	MRC-MW62C-031813	MRC-MW63A-040313	MRC-MW-64A-042513	MRC-MW-66A-042513	MRC-MW--67A-040313	MRC-MW--68A-040313	MRC-MW-69A-040113
SAMPLE DATE	3/18/2013	4/3/2013	4/25/2013	4/25/2013	4/3/2013	4/3/2013	4/1/2013
METALS (UG/L)							
ANTIMONY	0.3 U	0.3 U	--	0.3 U	0.3 U	0.3 U	0.8 J
ARSENIC	2 J	0.9 U	--	0.9 U	0.9 U	0.9 U	0.9 U
BARIUM	120	73	--	74	780	2500	300 J
BERYLLIUM	0.59 J	0.19 J	--	0.1 U	400 K	280 K	0.73 J
CADMIUM	0.1 U	0.1 U	--	0.1 U	8.6	9.4	1.2
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	4.9	0.9 U	--	0.9 U	1.6 J	0.9 U	1.5 J
COBALT	82	12	--	1.6	8100	1300	220
COPPER	2 B	5.6	--	0.65 J	1800	120	2.3
IRON	--	--	--	--	--	--	--
LEAD	0.27 J	0.79 J	--	0.2 U	5.1	0.83 J	5
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	0.1 U	0.1 U	--	0.1 U	0.13 B	0.1 U	0.1 U
MOLYBDENUM	0.2 B	0.2 U	--	0.21 J	0.2 U	0.29 J	0.2 U
NICKEL	110	21	--	2.4 B	14000	6200	350
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	0.5 U	1 J	--	2.4 J	3.6 J	3.1 J	0.5 U
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	0.1 U	0.1 U	--	0.1 U	0.18 J	0.9 J	0.1 U
SODIUM	--	--	--	--	--	--	--
THALLIUM	0.2 U	0.2 U	--	0.2 U	1.1 J	0.42 J	0.2 U
VANADIUM	0.8 U	1.3 J	--	0.8 U	0.81 J	0.8 U	1.9 J
ZINC	69	15 J	--	4 U	21000 K	7800 K	670
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	0.082 U	--	--	--	0.082 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW69B	MRC-MW70A	MRC-MW70B	MRC-MW71A	MRC-MW71B	MRC-MW72B	MRC-MW73B
SAMPLE ID	MRC-MW-69B-040113	MRC-MW70A-040313	MRC-MW70B-040313	MRC-MW--71A-040313	MRC-MW--71B-040313	MRC-MW72B-032613	MRC-MW73B-031913
SAMPLE DATE	4/1/2013	4/3/2013	4/3/2013	4/3/2013	4/3/2013	3/26/2013	3/19/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.46 U	0.23 U	0.77 U	0.23 U	1.5 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.44 U	0.28 J	0.73 U	0.22 U	1.5 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.36 U	0.18 U	0.6 U	0.18 U	1.2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	0.56 U	0.28 U	0.93 U	0.28 U	1.9 U
1,1-DICHLOROETHANE	0.15 U	1.3	2.9	1.4	4.9	0.15 U	1 U
1,1-DICHLOROETHENE	0.19 U	0.69 J	19	19	52	0.19 U	1.3 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	0.34 U	0.17 U	0.57 U	0.17 U	1.1 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	0.86 U	0.43 U	1.4 U	0.43 U	2.9 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.012 U	0.0059 U	0.02 U	0.0059 U	0.039 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	0.3 U	0.15 U	0.5 U	0.15 U	1 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.24 U	0.12 U	0.4 U	0.12 U	0.8 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	1.3 U	0.67 U	2.2 U	0.67 U	4.5 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.48 U	0.24 U	0.8 U	0.24 U	1.6 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.44 U	0.22 U	0.77 J	0.22 U	1.5 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.36 U	0.18 U	0.6 U	0.18 U	1.2 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.28 U	0.14 U	0.47 U	0.14 U	0.93 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.32 U	0.16 U	0.53 U	0.16 U	1.1 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
2-BUTANONE	0.57 U	0.57 U	1.1 U	0.57 U	1.9 U	0.57 U	3.8 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	2 U	0.99 U	3.3 UR	0.99 U	6.6 UR
2-CHLOROTOLUENE	0.11 U	0.11 U	0.22 U	0.11 U	0.37 U	0.11 U	0.73 U
2-HEXANONE	0.41 U	0.41 U	0.82 U	0.41 U	1.4 U	0.41 U	2.7 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.36 U	0.18 U	0.6 U	0.18 U	1.2 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.24 U	0.12 U	0.4 U	0.12 U	0.8 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	0.64 U	0.32 U	1.1 U	0.32 U	2.1 U
ACETONE	1.1 U	1.3 J	5.6 J	1.1 U	3.7 U	1.2 B	7.3 U
BENZENE	0.13 U	0.13 J	1.2 J	0.26 J	0.43 U	0.13 U	0.87 U
BROMOBENZENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.58 U	0.29 U	0.97 U	0.29 U	1.9 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.3 U	0.15 U	0.5 U	0.15 U	1 U
BROMOFORM	0.64 U	0.64 U	1.3 U	0.64 U	2.1 U	0.64 U	4.3 U
BROMOMETHANE	0.41 U	0.41 U	0.82 U	0.41 U	1.4 U	0.41 U	2.7 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
CHLOROBENZENE	0.15 U	0.15 U	0.3 U	0.15 U	0.5 U	0.15 U	1 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.36 U	0.18 U	0.6 U	0.18 U	1.2 U
CHLOROETHANE	0.29 U	0.29 U	0.58 U	0.29 U	0.97 U	0.29 U	1.9 U
CHLOROFORM	0.16 U	0.16 U	0.32 U	0.16 U	0.53 U	0.16 U	1.1 U
CHLOROMETHANE	0.3 U	0.3 U	0.6 U	0.3 U	1 U	0.3 U	2 U
CIS-1,2-DICHLOROETHENE	0.17 U	1.8	34	0.17 U	10	0.17 U	2.1 J
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.28 U	0.14 U	0.47 U	0.14 U	0.93 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW69B	MRC-MW70A	MRC-MW70B	MRC-MW71A	MRC-MW71B	MRC-MW72B	MRC-MW73B
SAMPLE ID	MRC-MW-69B-040113	MRC-MW70A-040313	MRC-MW70B-040313	MRC-MW--71A-040313	MRC-MW--71B-040313	MRC-MW72B-032613	MRC-MW73B-031913
SAMPLE DATE	4/1/2013	4/3/2013	4/3/2013	4/3/2013	4/3/2013	3/26/2013	3/19/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.56 U	0.28 U	0.93 U	0.28 U	1.9 U
DICHLORODIFLUOROMETHANE	0.31 U	0.31 UJ	0.62 UJ	0.31 UJ	1 U	0.31 UJ	2.1 U
DIISOPROPYL ETHER	1.5 U	1.5 U	3 U	1.5 U	5 U	1.5 U	10 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	0.22 U	0.11 U	0.37 U	0.11 U	0.73 U
ETHYLBENZENE	0.17 U	0.17 U	0.34 U	0.17 U	0.57 U	0.17 U	1.1 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	0.6 U	0.3 U	1 U	0.3 U	2 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
M+P-XYLENES	0.24 U	0.24 U	0.48 U	0.24 U	0.8 U	0.24 U	1.6 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	0.34 U	0.17 U	0.57 U	0.17 U	1.1 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.95 J	0.33 U	1.4 J	0.45 B	2.2 U
NAPHTHALENE	0.24 U	0.24 U	0.48 U	0.24 U	0.8 U	0.24 U	1.6 UJ
N-BUTYLBENZENE	0.12 U	0.12 U	0.24 U	0.12 U	0.4 U	0.12 U	0.8 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.28 U	0.14 U	0.47 U	0.14 U	0.93 U
O-XYLENE	0.14 U	0.14 U	0.28 U	0.14 U	0.47 U	0.14 U	0.93 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
STYRENE	0.11 U	0.11 U	0.22 U	0.11 U	0.37 U	0.11 U	0.73 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.13 U	0.067 U	0.22 U	0.067 U	0.45 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	7.8 UR	3.9 UR	13 UR	3.9 UR	26 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.58 U	0.29 U	0.97 U	0.29 U	1.9 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.26 U	0.13 U	0.43 U	0.13 U	0.87 U
TOTAL XYLENES	0.28 U	0.28 U	0.56 U	0.28 U	0.93 U	0.28 U	1.9 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	1.2 J	0.19 U	0.63 U	0.19 U	1.3 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.38 U	0.19 U	0.63 U	0.19 U	1.3 U
TRICHLOROETHENE	0.17 U	1.8	75	0.56 J	86	30	130
TRICHLOROFLUOROMETHANE	0.21 U	0.21 UJ	0.42 UJ	0.21 UJ	0.7 U	0.21 U	1.4 U
VINYL ACETATE	0.19 UR	0.19 U	0.38 U	0.19 U	0.63 UR	0.19 UR	1.3 UR
VINYL CHLORIDE	0.22 U	0.22 U	2.5	0.24 J	0.73 U	0.22 U	1.5 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	0.1 U	--
ETHENE	--	--	--	--	--	0.37 U	--
METHANE	--	--	--	--	--	0.14 B	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.49 U	1.7	13	1.5	16	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW69B	MRC-MW70A	MRC-MW70B	MRC-MW71A	MRC-MW71B	MRC-MW72B	MRC-MW73B
SAMPLE ID	MRC-MW-69B-040113	MRC-MW70A-040313	MRC-MW70B-040313	MRC-MW--71A-040313	MRC-MW--71B-040313	MRC-MW72B-032613	MRC-MW73B-031913
SAMPLE DATE	4/1/2013	4/3/2013	4/3/2013	4/3/2013	4/3/2013	3/26/2013	3/19/2013
METALS (UG/L)							
ANTIMONY	--	0.3 U	--	0.43 B	0.3 U	--	--
ARSENIC	--	2.8 J	--	0.9 U	0.9 U	--	--
BARIUM	--	68	--	39	67	--	--
BERYLLIUM	--	1.3 K	--	6.4 K	0.1 U	--	--
CADMIUM	--	0.1 U	--	13	0.1 U	--	--
CALCIUM	--	--	--	--	--	1100 J	--
CHROMIUM	--	0.9 U	--	0.9 U	0.9 U	--	--
COBALT	--	27	--	54	29	--	--
COPPER	--	1 J	--	4.1	0.5 UL	--	--
IRON	--	--	--	--	--	110 J	--
LEAD	--	0.69 J	--	0.4 J	0.2 U	--	--
MAGNESIUM	--	--	--	--	--	900 J	--
MANGANESE	--	--	--	--	--	62	--
MERCURY	--	0.1 U	--	0.1 U	0.15 B	0.12 U	--
MOLYBDENUM	--	0.2 U	--	0.2 U	0.2 U	--	--
NICKEL	--	29	--	110	35	--	--
POTASSIUM	--	--	--	--	--	1600 J	--
SELENIUM	--	0.79 J	--	0.5 U	0.5 U	--	--
SILICON DIOXIDE	--	--	--	--	--	8300	--
SILVER	--	0.1 U	--	0.1 U	0.1 U	--	--
SODIUM	--	--	--	--	--	9600	--
THALLIUM	--	0.2 U	--	0.2 U	0.2 U	--	--
VANADIUM	--	1.8 J	--	0.99 J	0.8 U	--	--
ZINC	--	48 K	--	180 K	84 K	--	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	5.7	--
AMMONIA-N (MG/L)	--	--	--	--	--	0.083 B	--
CHLORIDE (MG/L)	--	--	--	--	--	15 K	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	0.62 J	--
NITRATE-N (MG/L)	--	--	--	--	--	0.43	--
NITRITE-N (MG/L)	--	--	--	--	--	0.012 U	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	0.71	--
SULFATE (MG/L)	--	--	--	--	--	1.1	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	15	--
PERCHLORATE (UG/L)	0.082 U	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW74A	MRC-MW74B	MRC-MW74C	MRC-MW75A	MRC-MW76A	MRC-MW76B	MRC-MW77A
SAMPLE ID	MRC-MW74A-032113	MRC-MW74B-032113	MRC-MW74C-031913	MRC-MW75A-042313	MRC-MW76A-031813	MRC-MW76B-031813	MRC-MW77A-031913
SAMPLE DATE	3/21/2013	3/21/2013	3/19/2013	4/23/2013	3/18/2013	3/18/2013	3/19/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	9.2 U	290 U	0.46 U	--	0.23 U	0.23 U	0.46 U
1,1,1-TRICHLOROETHANE	8.8 U	280 U	0.44 U	--	0.22 U	0.22 U	0.44 U
1,1,2,2-TETRACHLOROETHANE	7.2 U	230 U	0.36 U	--	0.18 U	0.18 U	0.36 U
1,1,2-TRICHLOROTRIFLUOROETHANE	11 U	350 U	0.56 U	--	0.28 UJ	0.28 UJ	0.56 U
1,1-DICHLOROETHANE	6 U	190 U	0.3 U	--	0.15 U	1.9	18
1,1-DICHLOROETHENE	7.6 U	240 U	0.38 U	--	0.19 U	1.3	3
1,1-DICHLOROPROPENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
1,2,3-TRICHLOROBENZENE	6.8 UJ	210 UJ	0.34 UJ	--	0.17 U	0.17 U	0.34 U
1,2,3-TRICHLOROPROPANE	17 U	540 U	0.86 U	--	0.43 U	0.43 U	0.86 U
1,2,3-TRIMETHYLBENZENE	0.24 U	7.4 U	0.012 U	--	0.0059 U	0.0059 U	0.012 U
1,2,4-TRICHLOROBENZENE	6 UJ	190 UJ	0.3 U	--	0.15 U	0.15 U	0.3 U
1,2,4-TRIMETHYLBENZENE	4.8 U	150 U	0.24 U	--	0.12 U	0.12 U	0.24 U
1,2-DIBROMO-3-CHLOROPROPANE	27 U	840 U	1.3 U	--	0.67 U	0.67 U	1.3 U
1,2-DIBROMOETHANE	9.6 U	300 U	0.48 U	--	0.24 U	0.24 U	0.48 U
1,2-DICHLOROBENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
1,2-DICHLOROETHANE	8.8 U	280 U	0.44 U	--	0.22 U	0.22 U	0.44 U
1,2-DICHLOROPROPANE	7.2 U	230 U	0.36 U	--	0.18 U	0.18 U	0.36 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	5.6 U	180 U	0.28 U	--	0.14 U	0.14 U	0.28 U
1,3-DICHLOROPROPANE	6.4 U	200 U	0.32 U	--	0.16 U	0.16 U	0.32 U
1,4-DICHLOROBENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
2-BUTANONE	23 UJ	710 UJ	1.1 U	--	0.57 U	0.57 U	1.1 U
2-CHLOROETHYL VINYL ETHER	40 UJ	1200 UJ	2 UR	--	0.99 U	0.99 U	2 UR
2-CHLOROTOLUENE	4.4 U	140 U	0.22 U	--	0.11 U	0.11 U	0.22 U
2-HEXANONE	16 UJ	510 UJ	0.82 U	--	0.41 U	0.41 U	0.82 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	7.2 U	230 U	0.36 U	--	0.18 U	0.18 U	0.36 U
4-ISOPROPYLTOLUENE	4.8 U	150 U	0.24 U	--	0.12 U	0.12 U	0.24 U
4-METHYL-2-PENTANONE	13 UJ	400 UJ	0.64 U	--	0.32 U	0.32 U	0.64 U
ACETONE	55 J	1900 J	2.2 U	--	1.1 U	1.1 U	2.2 U
BENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.17 J	18
BROMOBENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
BROMOCHLOROMETHANE	12 U	360 U	0.58 U	--	0.29 U	0.29 U	0.58 U
BROMODICHLOROMETHANE	6 U	190 U	0.3 U	--	0.15 U	0.15 U	0.3 U
BROMOFORM	26 U	800 U	1.3 U	--	0.64 U	0.64 U	1.3 U
BROMOMETHANE	16 U	510 U	0.82 U	--	0.41 U	0.41 U	0.82 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
CARBON TETRACHLORIDE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
CHLOROBENZENE	6 U	190 U	0.3 U	--	0.15 U	0.15 U	0.3 U
CHLORODIBROMOMETHANE	7.2 U	230 U	0.36 U	--	0.18 U	0.18 U	0.36 U
CHLOROETHANE	12 U	360 U	0.58 U	--	0.29 U	0.29 U	0.58 U
CHLOROFORM	6.4 U	200 U	0.32 U	--	0.16 U	0.16 U	0.32 U
CHLOROMETHANE	12 U	380 U	0.6 U	--	0.3 U	0.3 U	0.6 U
CIS-1,2-DICHLOROETHENE	29 J	410 J	0.74 J	--	0.17 U	2	4.5
CIS-1,3-DICHLOROPROPENE	5.6 U	180 U	0.28 U	--	0.14 U	0.14 U	0.28 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW74A	MRC-MW74B	MRC-MW74C	MRC-MW75A	MRC-MW76A	MRC-MW76B	MRC-MW77A
SAMPLE ID	MRC-MW74A-032113	MRC-MW74B-032113	MRC-MW74C-031913	MRC-MW75A-042313	MRC-MW76A-031813	MRC-MW76B-031813	MRC-MW77A-031913
SAMPLE DATE	3/21/2013	3/21/2013	3/19/2013	4/23/2013	3/18/2013	3/18/2013	3/19/2013
CYCLOHEXANE	--	--	--	--	0.34 NJ	--	1.2 J
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	3.4 NJ
DIBROMOMETHANE	11 U	350 U	0.56 U	--	0.28 U	0.28 U	0.56 U
DICHLORODIFLUOROMETHANE	12 U	390 U	0.62 U	--	0.31 UJ	0.31 UJ	0.62 U
DIISOPROPYL ETHER	60 U	1900 U	3 U	--	1.5 U	1.5 U	3 U
ETHYL TERT-BUTYL ETHER	4.4 U	140 U	0.22 U	--	0.11 U	0.11 U	0.22 U
ETHYLBENZENE	6.8 U	210 U	0.34 U	--	0.17 U	0.17 U	0.34 U
HEXACHLOROBUTADIENE	12 U	380 U	0.6 U	--	0.3 UJ	0.3 UJ	0.6 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.35 J
M+P-XYLENES	9.6 U	300 U	0.48 U	--	0.24 U	0.24 U	0.48 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	0.47 J
METHYL TERT-BUTYL ETHER	6.8 U	210 U	0.34 U	--	0.17 U	0.17 U	61 J
METHYLENE CHLORIDE	18 B	410 U	0.66 U	--	0.33 U	0.33 U	0.66 U
NAPHTHALENE	9.6 UJ	300 UJ	0.48 UJ	--	0.24 U	0.24 U	1.4 B
N-BUTYLBENZENE	4.8 U	150 U	0.24 U	--	0.12 U	0.12 U	0.51 J
N-PROPYLBENZENE	5.6 U	180 U	0.28 U	--	0.14 U	0.14 U	0.28 U
O-XYLENE	5.6 U	180 U	0.28 U	--	0.14 U	0.14 U	0.28 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	1.5 J
STYRENE	4.4 U	140 U	0.22 U	--	0.11 U	0.11 U	0.22 U
TERT-AMYL METHYL ETHER	2.7 U	84 U	0.13 U	--	0.067 U	0.067 U	0.3 J
TERT-BUTYLBENZENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 U
TERTIARY-BUTYL ALCOHOL	160 UR	4900 UR	7.8 UR	--	3.9 UR	3.9 UR	7.8 UR
TETRACHLOROETHENE	12 U	360 U	0.58 U	--	0.29 U	0.29 U	0.58 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	5.2 U	160 U	0.26 U	--	0.13 U	0.13 U	0.26 B
TOTAL XYLENES	11 U	350 U	0.56 U	--	0.28 U	0.28 U	0.56 U
TRANS-1,2-DICHLOROETHENE	7.6 U	240 U	0.38 U	--	0.19 U	0.19 U	0.38 U
TRANS-1,3-DICHLOROPROPENE	7.6 U	240 U	0.38 U	--	0.19 U	0.19 U	0.38 U
TRICHLOROETHENE	1400	40000	54	--	0.24 J	19	8.6
TRICHLOROFLUOROMETHANE	8.4 UJ	260 UJ	0.42 U	--	0.21 UJ	0.21 UJ	0.42 U
VINYL ACETATE	7.6 UR	240 UR	0.38 UR	--	0.19 U	0.19 U	0.38 UR
VINYL CHLORIDE	8.8 U	280 U	0.44 U	--	0.22 U	0.22 U	1.9 J
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW74A	MRC-MW74B	MRC-MW74C	MRC-MW75A	MRC-MW76A	MRC-MW76B	MRC-MW77A
SAMPLE ID	MRC-MW74A-032113	MRC-MW74B-032113	MRC-MW74C-031913	MRC-MW75A-042313	MRC-MW76A-031813	MRC-MW76B-031813	MRC-MW77A-031913
SAMPLE DATE	3/21/2013	3/21/2013	3/19/2013	4/23/2013	3/18/2013	3/18/2013	3/19/2013
METALS (UG/L)							
ANTIMONY	--	--	--	0.36 J	0.3 U	0.3 U	0.3 U
ARSENIC	--	--	--	1.8 J	0.9 U	0.9 U	0.9 U
BARIUM	--	--	--	540	110	100	440
BERYLLIUM	--	--	--	9.4	23	0.52 J	20
CADMIUM	--	--	--	0.23 J	0.51 J	0.1 U	0.14 J
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	--	--	0.9 U	0.9 U	0.9 U	0.9 U
COBALT	--	--	--	240	560	63	260
COPPER	--	--	--	5	1.4 B	0.5 U	31
IRON	--	--	--	--	--	--	--
LEAD	--	--	--	1.3	0.2 U	0.2 U	0.31 J
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	--	--	0.1 U	0.1 U	0.1 U	0.1 UL
MOLYBDENUM	--	--	--	0.8 B	0.2 U	0.2 U	0.2 U
NICKEL	--	--	--	490	490	93	520
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	--	--	0.5 U	0.71 J	0.5 U	1.1 J
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	--	--	--	0.21 B	0.1 U	0.1 U	0.25 J
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	--	--	0.26 J	0.2 U	0.2 U	0.2 U
VANADIUM	--	--	--	3 J	0.8 U	0.8 U	0.8 U
ZINC	--	--	--	560	480	130	740
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	0.082 U	0.28 J	--	0.082 U	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW78B	MRC-MW79B	MRC-MW80A	MRC-MW80B	MRC-MW81A	MRC-MW81B	MRC-MW86A
SAMPLE ID	MRC-MW78B-031813	MRC-MW79B-032013	MRC-MW-80A-040813	MRC-MW-80B-040813	MRC-MW-81A-040213	MRC-MW-81B-040213	MRC-MW86A-031513
SAMPLE DATE	3/18/2013	3/20/2013	4/8/2013	4/8/2013	4/2/2013	4/2/2013	3/15/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	2.2 U	--	0.58 U	--	6.6 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	2.1 U	--	0.55 U	--	6.3 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	1.7 U	--	0.45 U	--	5.1 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 UJ	2.7 U	--	0.7 UJ	--	8 U	0.28 U
1,1-DICHLOROETHANE	0.15 U	2.5 J	--	1.2 J	--	4.3 U	0.15 U
1,1-DICHLOROETHENE	0.19 U	4 J	--	15	--	7.1 J	0.19 U
1,1-DICHLOROPROPENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	1.6 U	--	0.43 U	--	4.9 U	0.17 U
1,2,3-TRICHLOROPROPANE	0.43 U	4.1 U	--	1.1 U	--	12 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.056 U	--	0.015 U	--	0.17 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	1.4 U	--	0.38 U	--	4.3 U	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	1.1 U	--	0.3 U	--	3.4 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	6.4 U	--	1.7 U	--	19 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	2.3 U	--	0.6 U	--	6.9 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	2.1 U	--	0.55 U	--	6.3 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	1.7 U	--	0.45 U	--	5.1 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	1.3 U	--	0.35 U	--	4 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	1.5 U	--	0.4 U	--	4.6 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
2-BUTANONE	0.57 U	5.4 U	--	1.4 U	--	16 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	9.4 U	--	2.5 U	--	28 U	0.99 U
2-CHLOROTOLUENE	0.11 U	1 U	--	0.28 U	--	3.1 U	0.11 U
2-HEXANONE	0.41 U	3.9 U	--	1 U	--	12 U	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	1.7 U	--	0.45 U	--	5.1 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	1.1 U	--	0.3 U	--	3.4 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	3 U	--	0.8 U	--	9.1 U	0.32 U
ACETONE	1.3 B	10 U	--	4.1 J	--	31 U	1.1 U
BENZENE	0.13 U	2.7 J	--	0.52 B	--	3.7 U	0.13 U
BROMOBENZENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	2.8 U	--	0.73 U	--	8.3 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	1.4 U	--	0.38 U	--	4.3 U	0.15 U
BROMOFORM	0.64 U	6.1 U	--	1.6 U	--	18 U	0.64 U
BROMOMETHANE	0.41 U	3.9 U	--	1 U	--	12 U	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
CHLOROBENZENE	0.15 U	1.4 U	--	0.38 U	--	4.3 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	1.7 U	--	0.45 U	--	5.1 U	0.18 U
CHLOROETHANE	0.29 U	2.8 U	--	0.73 U	--	8.3 U	0.29 U
CHLOROFORM	0.16 U	1.5 U	--	0.4 U	--	4.6 U	0.16 U
CHLOROMETHANE	0.3 U	2.9 U	--	0.75 U	--	8.6 U	0.3 U
CIS-1,2-DICHLOROETHENE	0.65 J	98	--	2.2 J	--	220	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	1.3 U	--	0.35 U	--	4 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW78B	MRC-MW79B	MRC-MW80A	MRC-MW80B	MRC-MW81A	MRC-MW81B	MRC-MW86A
SAMPLE ID	MRC-MW78B-031813	MRC-MW79B-032013	MRC-MW-80A-040813	MRC-MW-80B-040813	MRC-MW-81A-040213	MRC-MW-81B-040213	MRC-MW86A-031513
SAMPLE DATE	3/18/2013	3/20/2013	4/8/2013	4/8/2013	4/2/2013	4/2/2013	3/15/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	2.7 U	--	0.7 U	--	8 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 UJ	3 UJ	--	0.78 UJ	--	8.9 U	0.31 UJ
DIISOPROPYL ETHER	1.5 U	14 U	--	3.8 U	--	43 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	1 U	--	0.28 U	--	3.1 U	0.11 U
ETHYLBENZENE	0.17 U	1.6 U	--	0.43 U	--	4.9 U	0.17 U
HEXACHLOROBUTADIENE	0.3 UJ	2.9 U	--	0.75 U	--	8.6 U	0.3 UJ
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
M+P-XYLENES	0.24 U	2.3 U	--	0.6 U	--	6.9 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	39	--	0.43 U	--	4.9 U	0.17 U
METHYLENE CHLORIDE	0.33 U	4 B	--	1.8 B	--	13 J	0.33 U
NAPHTHALENE	0.24 U	2.3 U	--	0.6 U	--	6.9 U	0.24 U
N-BUTYLBENZENE	0.12 U	1.1 U	--	0.3 U	--	3.4 U	0.12 U
N-PROPYLBENZENE	0.14 U	1.3 U	--	0.35 U	--	4 U	0.14 U
O-XYLENE	0.14 U	1.3 U	--	0.35 U	--	4 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
STYRENE	0.11 U	1 U	--	0.28 U	--	3.1 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.64 U	--	0.17 U	--	1.9 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	37 UR	--	9.8 U	--	110 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	2.8 U	--	0.73 U	--	8.3 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	1.2 U	--	0.33 U	--	3.7 U	0.13 U
TOTAL XYLENES	0.28 U	2.7 U	--	0.7 U	--	8 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	1.8 U	--	0.48 U	--	7.7 J	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	1.8 U	--	0.48 U	--	5.4 U	0.19 U
TRICHLOROETHENE	13	320	--	57	--	700	0.17 U
TRICHLOROFLUOROMETHANE	0.21 UJ	2 UJ	--	0.53 UJ	--	6 U	0.21 UJ
VINYL ACETATE	0.19 U	1.8 UR	--	0.48 U	--	5.4 UR	0.19 U
VINYL CHLORIDE	0.22 U	26	--	0.55 U	--	50	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	0.29 J	--
ETHENE	--	--	--	--	--	8	--
METHANE	--	--	--	--	--	450	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	4	10	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW78B	MRC-MW79B	MRC-MW80A	MRC-MW80B	MRC-MW81A	MRC-MW81B	MRC-MW86A
SAMPLE ID	MRC-MW78B-031813	MRC-MW79B-032013	MRC-MW-80A-040813	MRC-MW-80B-040813	MRC-MW-81A-040213	MRC-MW-81B-040213	MRC-MW86A-031513
SAMPLE DATE	3/18/2013	3/20/2013	4/8/2013	4/8/2013	4/2/2013	4/2/2013	3/15/2013
METALS (UG/L)							
ANTIMONY	0.77 B	0.3 U	0.3 U	--	0.3 U	0.3 U	0.3 U
ARSENIC	1 J	2.9 J	0.9 U	--	1.2 J	0.9 U	0.98 J
BARIUM	83	320	21	--	120	200	120
BERYLLIUM	0.1 U	2	0.76 J	--	1.6	0.1 U	0.17 J
CADMIUM	0.14 J	0.28 J	0.1 U	--	0.1 U	0.1 U	0.23 J
CALCIUM	--	--	--	--	--	110000	--
CHROMIUM	0.9 U	2.9	1.3 J	--	0.9 U	6.1	0.9 U
COBALT	39	300	1.5 B	--	86	4.5	140
COPPER	2.3 B	16	27	--	0.5 U	0.65 B	1.1 B
IRON	--	--	--	--	--	3400	--
LEAD	0.2 U	0.78 J	0.2 U	--	0.2 U	0.23 J	0.2 U
MAGNESIUM	--	--	--	--	--	1400 J	--
MANGANESE	--	--	--	--	--	190	--
MERCURY	0.1 U	0.1 UL	0.1 U	--	0.1 UL	0.12 U	0.1 U
MOLYBDENUM	0.91 B	0.81 B	0.2 U	--	0.2 U	0.97 B	1.4 J
NICKEL	14	100	4.4 B	--	120	13	100
POTASSIUM	--	--	--	--	--	2800 J	--
SELENIUM	0.5 U	0.52 J	0.5 U	--	0.83 J	0.5 U	0.5 U
SILICON DIOXIDE	--	--	--	--	--	5700	--
SILVER	0.1 U	0.1 U	0.1 U	--	0.1 U	0.1 U	0.1 U
SODIUM	--	--	--	--	--	100000	--
THALLIUM	0.2 U	0.2 U	0.2 U	--	0.2 U	0.2 U	0.2 U
VANADIUM	1.2 J	4.8 J	0.8 U	--	0.8 U	1.2 J	0.8 U
ZINC	100	170	28 K	--	66	16 B	25
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	9	--
AMMONIA-N (MG/L)	--	--	--	--	--	0.7	--
CHLORIDE (MG/L)	--	--	--	--	--	390	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	1.7	--
NITRATE-N (MG/L)	--	--	--	--	--	0.023 U	--
NITRITE-N (MG/L)	--	--	--	--	--	0.012 U	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	0.044 UJ	--
SULFATE (MG/L)	--	--	--	--	--	14	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	570	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW86B	MRC-MW87A	MRC-MW87B	MRC-MW88B	MRC-MW90B	MRC-MW91A	MRC-MW92C
SAMPLE ID	MRC-MW86B-031513	MRC-MW87A-031813	MRC-MW87B-031513	MRC-MW88B-031913	MRC-MW90B-042313	MRC-MW91A-042313	MRC-MW-92C-050213
SAMPLE DATE	3/15/2013	3/18/2013	3/15/2013	3/19/2013	4/23/2013	4/23/2013	5/2/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.58 U	0.23 U	0.46 U	--	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.55 U	0.22 U	0.44 U	--	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.45 U	0.18 U	0.36 U	--	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 UJ	0.7 U	0.28 U	0.56 U	--	0.28 U
1,1-DICHLOROETHANE	0.19 J	0.15 U	0.38 U	0.15 U	0.3 U	--	0.15 U
1,1-DICHLOROETHENE	0.19 U	0.19 U	0.48 U	0.19 U	9.6	--	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	0.43 U	0.22 B	0.34 U	--	0.17 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	1.1 U	0.43 U	0.86 U	--	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.015 U	0.0059 U	0.012 U	--	0.0059 UJ
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	0.38 U	0.15 U	0.3 U	--	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.3 U	0.12 U	0.24 U	--	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	1.7 U	0.67 U	1.3 U	--	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.6 U	0.24 U	0.48 U	--	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.55 U	0.22 U	0.44 U	--	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.45 U	0.18 U	0.36 U	--	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.35 U	0.14 U	0.28 U	--	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.4 U	0.16 U	0.32 U	--	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
2-BUTANONE	0.57 U	0.57 U	1.4 U	0.57 U	1.1 U	--	1.6 J
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	2.5 U	0.99 UR	2 U	--	0.99 UR
2-CHLOROTOLUENE	0.11 U	0.11 U	0.28 U	0.11 U	0.22 U	--	0.11 U
2-HEXANONE	0.41 U	0.41 U	1 U	0.41 U	0.82 U	--	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.45 U	0.18 U	0.36 U	--	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.3 U	0.12 U	0.24 U	--	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	0.8 U	0.32 U	0.64 U	--	0.32 U
ACETONE	1.1 U	1.9 B	13 B	1.1 U	3.5 J	--	10
BENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
BROMOBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.73 U	0.29 U	0.58 U	--	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.38 U	0.15 U	0.3 U	--	0.15 U
BROMOFORM	0.64 U	0.64 U	1.6 U	0.64 U	1.3 U	--	0.64 U
BROMOMETHANE	0.41 U	0.41 U	1 U	0.41 U	0.82 U	--	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.16 J	0.33 U	0.13 U	0.42 J	--	0.75 J
CARBON TETRACHLORIDE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	0.38 U	0.15 U	0.3 U	--	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.45 U	0.18 U	0.36 U	--	0.18 U
CHLOROETHANE	0.29 U	0.29 U	0.73 U	0.29 U	0.58 U	--	0.29 U
CHLOROFORM	0.16 U	0.16 U	0.4 U	0.16 U	0.57 J	--	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	0.75 U	0.3 U	0.6 U	--	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	0.17 U	2.2 J	0.17 U	3.3	--	1.2
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.35 U	0.14 U	0.28 U	--	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW86B	MRC-MW87A	MRC-MW87B	MRC-MW88B	MRC-MW90B	MRC-MW91A	MRC-MW92C
SAMPLE ID	MRC-MW86B-031513	MRC-MW87A-031813	MRC-MW87B-031513	MRC-MW88B-031913	MRC-MW90B-042313	MRC-MW91A-042313	MRC-MW-92C-050213
SAMPLE DATE	3/15/2013	3/18/2013	3/15/2013	3/19/2013	4/23/2013	4/23/2013	5/2/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.7 U	0.28 U	0.56 U	--	0.28 U
DICHLORODIFLUOROMETHANE	0.31 UJ	0.31 UJ	0.78 UJ	0.31 U	0.62 U	--	0.31 U
DIISOPROPYL ETHER	1.5 U	2 J	3.8 U	1.5 U	3 U	--	1.5 UJ
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	0.28 U	0.11 U	0.22 U	--	0.11 UJ
ETHYLBENZENE	0.17 U	0.17 U	0.43 U	0.17 U	0.34 U	--	0.17 U
HEXACHLOROBUTADIENE	0.3 UJ	0.3 UJ	0.75 UJ	0.3 U	0.6 U	--	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
M+P-XYLENES	0.24 U	0.24 U	0.6 U	0.24 U	0.48 U	--	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	0.43 U	0.17 U	0.34 U	--	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.83 U	0.33 U	0.66 U	--	0.33 U
NAPHTHALENE	0.24 U	0.24 U	0.6 U	0.68 B	0.48 U	--	0.24 U
N-BUTYLBENZENE	0.12 U	0.12 U	0.3 U	0.12 U	0.24 U	--	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.35 U	0.14 U	0.28 U	--	0.14 U
O-XYLENE	0.14 U	0.14 U	0.35 U	0.14 U	0.28 U	--	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
STYRENE	0.11 U	0.11 U	0.28 U	0.11 U	0.22 U	--	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.17 U	0.067 U	0.13 U	--	0.067 UJ
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	4.5 J	9.8 UR	3.9 UR	7.8 UR	--	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.73 U	0.29 U	0.58 U	--	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.33 U	0.13 U	0.26 U	--	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	0.7 U	0.28 U	0.56 U	--	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	0.48 U	0.19 U	0.38 U	--	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.48 U	0.19 U	0.38 U	--	0.19 U
TRICHLOROETHENE	0.17 U	0.17 U	52	0.46 J	71	--	1.3
TRICHLOROFLUOROMETHANE	0.21 UJ	0.21 UJ	0.53 UJ	0.21 U	0.42 U	--	0.21 U
VINYL ACETATE	0.19 U	0.19 U	0.48 U	0.19 UR	0.38 UR	--	0.19 UR
VINYL CHLORIDE	0.22 U	0.22 U	0.55 U	0.22 U	0.44 U	--	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	3.7	4.7	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW86B	MRC-MW87A	MRC-MW87B	MRC-MW88B	MRC-MW90B	MRC-MW91A	MRC-MW92C
SAMPLE ID	MRC-MW86B-031513	MRC-MW87A-031813	MRC-MW87B-031513	MRC-MW88B-031913	MRC-MW90B-042313	MRC-MW91A-042313	MRC-MW-92C-050213
SAMPLE DATE	3/15/2013	3/18/2013	3/15/2013	3/19/2013	4/23/2013	4/23/2013	5/2/2013
METALS (UG/L)							
ANTIMONY	0.3 U	--	1.9 J	--	--	--	0.6 UL
ARSENIC	0.9 U	--	1.4 J	--	--	--	7.7 J
BARIUM	160	--	150	--	--	--	320 J
BERYLLIUM	0.57 J	--	0.11 J	--	--	--	15
CADMIUM	0.13 J	--	0.1 U	--	--	--	0.6 J
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	0.9 U	--	11	--	--	--	680 J
COBALT	230	--	11	--	--	--	220 L
COPPER	0.79 B	--	6.7	--	--	--	120 J
IRON	--	--	--	--	--	--	--
LEAD	0.29 J	--	0.4 J	--	--	--	41
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	0.1 U	--	0.1 U	--	--	--	0.15 B
MOLYBDENUM	0.3 J	--	10	--	--	--	12 J
NICKEL	220	--	21	--	--	--	620
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	0.5 U	--	0.76 J	--	--	--	2.2 J
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	0.1 U	--	0.1 U	--	--	--	0.2 U
SODIUM	--	--	--	--	--	--	--
THALLIUM	0.2 U	--	0.2 U	--	--	--	0.69 J
VANADIUM	0.85 J	--	7.8 J	--	--	--	81 J
ZINC	230	--	6.9 J	--	--	--	380
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	0.48 J	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW93A	MRC-MW93D	MRC-MW94B	MRC-MW94D	MRC-MW95B	MRC-MW95D	MRC-MW96A
SAMPLE ID	MRC-MW93A-032113	MRC-MW-93D-043013	MRC-MW-94B-032013	MRC-MW-94D-043013	MRC-MW95B-031913	MRC-OF-95D-050113	MRC-MW-96A-032713
SAMPLE DATE	3/21/2013	4/30/2013	3/20/2013	4/30/2013	3/19/2013	5/1/2013	3/27/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	190 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	180 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	150 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 UJ	0.28 U	0.28 UJ	0.28 U	0.28 U	230 U
1,1-DICHLOROETHANE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	120 U
1,1-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	160 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
1,2,3-TRICHLOROBENZENE	0.17 UJ	0.17 U	0.17 U	0.17 U	0.19 B	0.17 U	140 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	360 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.0059 U	0.0059 U	0.0059 U	0.0059 U	4.9 U
1,2,4-TRICHLOROBENZENE	0.15 UJ	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	120 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	100 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	560 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	200 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	180 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	150 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	120 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	130 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
2-BUTANONE	0.57 UJ	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	470 U
2-CHLOROETHYL VINYL ETHER	0.99 UJ	0.99 U	0.99 U	0.99 U	0.99 UR	0.99 U	820 U
2-CHLOROTOLUENE	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	92 U
2-HEXANONE	0.41 UJ	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	340 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	150 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	100 U
4-METHYL-2-PENTANONE	0.32 UJ	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	270 U
ACETONE	1.1 B	1.1 U	1.1 U	1.1 U	1.9 B	1.1 U	970 B
BENZENE	0.13 U	0.19 B	0.13 U	0.13 U	0.13 U	0.13 U	110 U
BROMOBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	240 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	120 U
BROMOFORM	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	530 U
BROMOMETHANE	0.41 U	0.41 UJ	0.41 U	0.41 UJ	0.41 U	0.41 U	340 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
CHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	120 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	150 U
CHLOROETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	240 U
CHLOROFORM	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.33 J	130 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	250 U
CIS-1,2-DICHLOROETHENE	1.4	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	26000
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	120 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 47 OF 70

LOCATION	MRC-MW93A	MRC-MW93D	MRC-MW94B	MRC-MW94D	MRC-MW95B	MRC-MW95D	MRC-MW96A
SAMPLE ID	MRC-MW93A-032113	MRC-MW-93D-043013	MRC-MW-94B-032013	MRC-MW-94D-043013	MRC-MW95B-031913	MRC-OF-95D-050113	MRC-MW-96A-032713
SAMPLE DATE	3/21/2013	4/30/2013	3/20/2013	4/30/2013	3/19/2013	5/1/2013	3/27/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	230 U
DICHLORODIFLUOROMETHANE	0.31 U	0.31 UJ	0.31 UJ	0.31 UJ	0.31 U	0.31 U	260 UJ
DIISOPROPYL ETHER	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1200 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	92 U
ETHYLBENZENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	140 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	0.3 U	0.3 U	0.34 B	0.3 U	250 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
M+P-XYLENES	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	200 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	140 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	660 B
NAPHTHALENE	0.24 UJ	0.24 U	0.24 U	0.24 U	0.5 B	0.24 U	200 U
N-BUTYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	100 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	120 U
O-XYLENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	120 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
STYRENE	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	92 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	56 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3200 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	240 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	110 U
TOTAL XYLENES	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	230 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	160 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	160 U
TRICHLOROETHENE	1.7	0.17 U	0.17 U	0.17 U	2.1	0.17 U	3300
TRICHLOROFLUOROMETHANE	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ	0.21 U	0.21 UJ	170 UJ
VINYL ACETATE	0.19 UR	0.19 UR	0.19 UR	0.19 UR	0.19 UR	0.19 UR	160 U
VINYL CHLORIDE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	180 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	0.49 U	--	0.53 U	--	0.47 UJ	3.5
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW93A	MRC-MW93D	MRC-MW94B	MRC-MW94D	MRC-MW95B	MRC-MW95D	MRC-MW96A
SAMPLE ID	MRC-MW93A-032113	MRC-MW-93D-043013	MRC-MW-94B-032013	MRC-MW-94D-043013	MRC-MW95B-031913	MRC-OF-95D-050113	MRC-MW-96A-032713
SAMPLE DATE	3/21/2013	4/30/2013	3/20/2013	4/30/2013	3/19/2013	5/1/2013	3/27/2013
METALS (UG/L)							
ANTIMONY	0.3 U	1.1 B	--	0.3 U	--	0.3 U	0.3 U
ARSENIC	0.9 U	1 J	--	0.9 U	--	0.9 U	0.9 U
BARIUM	180	83	--	13	--	11	220
BERYLLIUM	35	0.13 J	--	0.1 U	--	0.25 J	9.9
CADMIUM	2.3	0.1 U	--	0.1 U	--	0.67 J	0.34 J
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	4.7	6.2	--	0.9 U	--	0.9 U	0.94 J
COBALT	1900	2	--	0.97 J	--	2.7	390
COPPER	39	9.5	--	9.1	--	5.7	4.4
IRON	--	--	--	--	--	--	--
LEAD	2.2	8	--	0.2 U	--	0.29 J	0.57 J
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	0.1 UL	0.1 U	--	0.1 U	--	0.1 U	0.1 U
MOLYBDENUM	1.3 B	0.97 J	--	0.2 U	--	0.25 J	0.2 U
NICKEL	1800	8.4	--	4.9	--	6.7	310
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	6.3 K	0.5 UL	--	0.5 UL	--	0.5 U	1.3 J
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	0.1 U	0.1 U	--	0.1 U	--	0.1 J	0.1 UL
SODIUM	--	--	--	--	--	--	--
THALLIUM	0.2 U	0.2 U	--	0.2 U	--	0.2 U	0.2 U
VANADIUM	3.2 J	8.9 J	--	0.8 U	--	0.8 U	0.8 U
ZINC	1300 K	640	--	6 J	--	8.7 J	380 K
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	0.082 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW96B	MRC-MW96D	MRC-MW98A	MRC-MW98B	MRC-MW100A	MRC-MW100B	MRC-MW101A
SAMPLE ID	MRC-MW-96B-032713	MRC-MW-96D-050613	MRC-MW98A-042913	MRC-MW98B-042913	MRC-MW100A-043013	MRC-MW100B-043013	MRC-MW101A-032013
SAMPLE DATE	3/27/2013	5/6/2013	4/29/2013	4/29/2013	4/30/2013	4/30/2013	3/20/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	5.8 U	0.23 U	0.23 U	3.8 U	0.23 U	2.3 U	0.33 U
1,1,1-TRICHLOROETHANE	5.5 U	0.22 U	0.22 U	60	0.22 U	2.2 U	0.31 U
1,1,2,2-TETRACHLOROETHANE	4.5 U	0.18 U	0.18 U	3 U	0.18 U	1.8 U	0.26 U
1,1,2-TRICHLOROTRIFLUOROETHANE	7 U	0.28 U	0.28 U	4.7 U	0.28 U	2.8 U	0.4 U
1,1-DICHLOROETHANE	3.8 U	0.15 U	2.2	110	1.2	24	0.94 J
1,1-DICHLOROETHENE	4.8 U	0.19 U	3.4	250 L	0.49 J	79	1.1 J
1,1-DICHLOROPROPENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
1,2,3-TRICHLOROBENZENE	4.3 U	0.17 UJ	0.17 U	2.8 U	0.17 UJ	1.7 U	0.24 U
1,2,3-TRICHLOROPROPANE	11 U	0.43 U	0.43 U	7.2 U	0.43 U	4.3 U	0.61 U
1,2,3-TRIMETHYLBENZENE	26 J	0.0059 U	0.0059 U	0.098 U	0.0059 U	0.059 U	0.0084 U
1,2,4-TRICHLOROBENZENE	3.8 U	0.15 UJ	0.15 U	2.5 U	0.15 U	1.5 U	0.21 U
1,2,4-TRIMETHYLBENZENE	19 J	0.12 U	0.12 U	2 U	0.12 U	1.2 U	0.17 U
1,2-DIBROMO-3-CHLOROPROPANE	17 U	0.67 U	0.67 U	11 U	0.67 U	6.7 U	0.96 U
1,2-DIBROMOETHANE	6 U	0.24 U	0.24 U	4 U	0.24 U	2.4 U	0.34 U
1,2-DICHLOROBENZENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
1,2-DICHLOROETHANE	5.5 U	0.22 U	0.22 U	3.7 U	0.22 U	2.2 U	0.31 U
1,2-DICHLOROPROPANE	4.5 U	0.18 U	0.18 U	3 U	0.18 U	1.8 U	0.26 U
1,3,5-TRIMETHYLBENZENE	8.4 NJ	--	--	--	--	--	--
1,3-DICHLOROBENZENE	3.5 U	0.14 U	0.14 U	2.3 U	0.14 U	1.4 U	0.2 U
1,3-DICHLOROPROPANE	4 U	0.16 U	0.16 U	2.7 U	0.16 U	1.6 U	0.23 U
1,4-DICHLOROBENZENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
2-BUTANONE	14 U	0.57 U	0.57 U	9.5 U	0.57 U	5.7 U	0.82 U
2-CHLOROETHYL VINYL ETHER	25 U	0.99 U	0.99 U	17 UR	0.99 U	9.9 U	1.4 U
2-CHLOROTOLUENE	2.8 U	0.11 U	0.11 U	1.8 U	0.11 U	1.1 U	0.16 U
2-HEXANONE	10 U	0.41 U	0.41 U	6.8 U	0.41 U	4.1 U	0.59 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	4.5 U	0.18 U	0.18 U	3 U	0.18 U	1.8 U	0.26 U
4-ISOPROPYLTOLUENE	3 U	0.12 U	0.12 U	2 U	0.12 U	1.2 U	0.17 U
4-METHYL-2-PENTANONE	8 U	0.32 U	0.32 U	5.3 U	0.32 U	3.2 U	0.46 U
ACETONE	28 U	1.1 UR	1.1 UR	18 UR	1.1 UR	11 U	1.6 U
BENZENE	560	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
BROMOBENZENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
BROMOCHLOROMETHANE	7.3 U	0.29 U	0.29 U	4.8 U	0.29 U	2.9 U	0.41 U
BROMODICHLOROMETHANE	3.8 U	0.15 U	0.15 U	2.5 U	0.15 U	1.5 U	0.21 U
BROMOFORM	16 U	0.64 U	0.64 U	11 U	0.64 U	6.4 U	0.92 U
BROMOMETHANE	10 U	0.41 U	0.41 U	6.8 U	0.41 U	4.1 U	0.59 U
BUTANE	31 NJ	--	--	--	--	--	--
CARBON DISULFIDE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
CARBON TETRACHLORIDE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
CHLOROBENZENE	3.8 U	0.15 U	0.15 U	2.5 U	0.15 U	1.5 U	0.21 U
CHLORODIBROMOMETHANE	4.5 U	0.18 U	0.18 U	3 U	0.18 U	1.8 U	0.26 U
CHLOROETHANE	7.3 U	0.29 U	0.29 U	32	0.29 U	2.9 U	0.41 U
CHLOROFORM	4 U	0.16 U	0.16 U	2.7 U	0.16 U	1.6 U	0.23 U
CHLOROMETHANE	7.5 U	0.3 U	0.3 U	5 U	0.3 U	3 U	0.43 U
CIS-1,2-DICHLOROETHENE	9.6 J	0.17 U	0.56 J	28	0.52 J	41	51
CIS-1,3-DICHLOROPROPENE	3.5 U	0.14 U	0.14 U	2.3 U	0.14 U	1.4 U	0.2 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW96B	MRC-MW96D	MRC-MW98A	MRC-MW98B	MRC-MW100A	MRC-MW100B	MRC-MW101A
SAMPLE ID	MRC-MW-96B-032713	MRC-MW-96D-050613	MRC-MW98A-042913	MRC-MW98B-042913	MRC-MW100A-043013	MRC-MW100B-043013	MRC-MW101A-032013
SAMPLE DATE	3/27/2013	5/6/2013	4/29/2013	4/29/2013	4/30/2013	4/30/2013	3/20/2013
CYCLOHEXANE	8.3 NJ	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	7 U	0.28 U	0.28 U	4.7 U	0.28 U	2.8 U	0.4 U
DICHLORODIFLUOROMETHANE	7.8 UJ	0.31 U	0.31 U	5.2 U	0.31 U	3.1 U	0.44 UJ
DIISOPROPYL ETHER	38 U	1.5 U	1.5 U	25 U	1.5 U	15 U	2.1 U
ETHYL TERT-BUTYL ETHER	2.8 U	0.11 U	0.11 U	1.8 U	0.11 U	1.1 U	0.16 U
ETHYLBENZENE	5.6 J	0.17 U	0.17 U	2.8 U	0.17 U	1.7 U	0.24 U
HEXACHLOROBUTADIENE	7.5 U	0.3 U	0.3 U	5 U	0.3 U	3 U	0.43 U
HEXANE	14 NJ	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	5.5 J	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
M+P-XYLENES	32 J	0.24 U	0.24 U	4 U	0.24 U	2.4 U	0.34 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	4.3 U	0.17 U	0.17 U	2.8 U	0.17 U	1.7 U	0.24 U
METHYLENE CHLORIDE	19 B	0.33 U	0.33 U	25	0.33 U	8.4 J	0.47 U
NAPHTHALENE	13 J	0.24 UJ	0.24 U	4 U	0.24 UJ	2.4 U	0.34 U
N-BUTYLBENZENE	3 U	0.12 U	0.12 U	2 U	0.12 U	1.2 U	0.17 U
N-PROPYLBENZENE	3.5 U	0.14 U	0.14 U	2.3 U	0.14 U	1.4 U	0.2 U
O-XYLENE	61	0.14 U	0.14 U	2.3 U	0.14 U	1.4 U	0.2 U
PENTANE	98 NJ	--	--	--	--	--	--
SEC-BUTYLBENZENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
STYRENE	2.8 U	0.11 U	0.11 U	1.8 U	0.11 U	1.1 U	0.16 U
TERT-AMYL METHYL ETHER	1.7 U	0.067 U	0.067 U	1.1 U	0.067 U	0.67 U	0.096 U
TERT-BUTYLBENZENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
TERTIARY-BUTYL ALCOHOL	98 UR	3.9 UR	3.9 UR	65 UR	3.9 UR	39 UR	5.6 UR
TETRACHLOROETHENE	7.3 U	0.29 U	0.38 J	6.7 J	0.29 U	2.9 U	0.41 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	3.3 U	0.13 U	0.13 U	2.2 U	0.13 U	1.3 U	0.19 U
TOTAL XYLENES	93	0.28 U	0.28 U	4.7 U	0.28 U	2.8 U	0.4 U
TRANS-1,2-DICHLOROETHENE	4.8 U	0.19 U	0.19 U	3.2 U	0.19 U	1.9 U	2.2
TRANS-1,3-DICHLOROPROPENE	4.8 U	0.19 U	0.19 U	3.2 U	0.19 U	1.9 U	0.27 U
TRICHLOROETHENE	17 J	0.17 U	4.2	530	3	230	8.9
TRICHLOROFLUOROMETHANE	5.3 UJ	0.21 U	0.21 U	3.5 U	0.21 U	2.1 U	0.3 UJ
VINYL ACETATE	4.8 U	0.19 U	0.19 U	3.2 U	0.19 U	1.9 UR	0.27 UR
VINYL CHLORIDE	5.5 U	0.22 U	0.22 U	3.7 U	0.22 U	2.2 U	4
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.48 U	0.47 U	2.5	120	1.3	45	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW96B	MRC-MW96D	MRC-MW98A	MRC-MW98B	MRC-MW100A	MRC-MW100B	MRC-MW101A
SAMPLE ID	MRC-MW-96B-032713	MRC-MW-96D-050613	MRC-MW98A-042913	MRC-MW98B-042913	MRC-MW100A-043013	MRC-MW100B-043013	MRC-MW101A-032013
SAMPLE DATE	3/27/2013	5/6/2013	4/29/2013	4/29/2013	4/30/2013	4/30/2013	3/20/2013
METALS (UG/L)							
ANTIMONY	0.3 U	0.3 U	0.3 U	0.43 J	--	0.3 U	--
ARSENIC	0.9 U	0.9 UL	0.9 U	0.9 U	--	0.9 U	--
BARIUM	600	6.1 K	45	42	--	84	--
BERYLLIUM	8.3	0.12 J	0.1 U	13	--	0.75 J	--
CADMIUM	1.8	0.12 J	0.1 U	0.21 J	--	0.1 U	--
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	0.9 U	0.9 U	9.4	0.9 U	--	0.9 U	--
COBALT	790	1.9	0.8 B	86	--	70	--
COPPER	45	4.1	1.4 J	2.6	--	0.92 J	--
IRON	--	--	--	--	--	--	--
LEAD	2	0.2 U	0.64 J	0.93 J	--	0.39 J	--
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	0.1 U	0.1 U	0.1 UL	0.1 UL	--	0.1 U	--
MOLYBDENUM	0.2 U	0.2 U	0.89 J	0.2 U	--	0.2 U	--
NICKEL	1400	3.8 K	2.1	140	--	120	--
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	0.83 J	0.5 U	2.1 J	0.5 UL	--	0.5 UL	--
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	0.1 UL	0.1 U	0.1 U	0.1 U	--	0.1 U	--
SODIUM	--	--	--	--	--	--	--
THALLIUM	0.2 U	0.2 U	0.2 U	0.2 U	--	0.2 U	--
VANADIUM	0.8 U	0.8 UJ	1.8 J	0.8 U	--	0.96 J	--
ZINC	1400 K	4 U	4 U	220	--	180	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	3.6	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW101B	MRC-MW102A	MRC-MW102B	MRC-MW103A	MRC-MW103B	MRC-MW104A	MRC-MW104B
SAMPLE ID	MRC-MW101B-032013	MRC-MW102A-032013	MRC-MW102B-032013	MRC-MW103A-032713	MRC-MW103B-032713	MRC-MW104A-032113	MRC-MW104B-032113
SAMPLE DATE	3/20/2013	3/20/2013	3/20/2013	3/27/2013	3/27/2013	3/21/2013	3/21/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	2.1 U	--	--	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	2 U	--	--	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	1.6 U	--	--	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	2.5 U	--	--	0.28 U	0.28 U
1,1-DICHLOROETHANE	3.9	0.15 U	1.4 U	--	--	0.15 U	0.15 U
1,1-DICHLOROETHENE	1	0.19 U	1.7 U	--	--	0.19 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	1.5 U	--	--	0.17 UJ	0.17 UJ
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	3.9 U	--	--	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.054 U	--	--	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	1.4 U	--	--	0.15 UJ	0.15 UJ
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	1.1 U	--	--	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	6.1 U	--	--	0.67 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	2.2 U	--	--	0.24 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	2 U	--	--	0.22 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	1.6 U	--	--	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	1.3 U	--	--	0.14 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	1.5 U	--	--	0.16 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 UJ
2-BUTANONE	0.57 U	0.57 U	5.2 U	--	--	0.57 UJ	0.57 UJ
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	9 U	--	--	0.99 UJ	0.99 UJ
2-CHLOROTOLUENE	0.11 U	0.11 U	1 U	--	--	0.11 U	0.11 U
2-HEXANONE	0.41 U	0.41 U	3.7 U	--	--	0.41 UJ	0.41 UJ
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	1.6 U	--	--	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	1.1 U	--	--	0.12 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	2.9 U	--	--	0.32 UJ	0.32 UJ
ACETONE	1.1 U	1.1 U	10 U	--	--	1.1 U	1.1 U
BENZENE	0.13 U	1	1.2 U	--	--	0.13 U	0.13 U
BROMOBENZENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	2.6 U	--	--	0.29 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	1.4 U	--	--	0.15 U	0.15 U
BROMOFORM	0.64 U	0.64 U	5.8 U	--	--	0.64 U	0.64 U
BROMOMETHANE	0.41 U	0.41 U	3.7 U	--	--	0.41 U	0.41 UJ
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	1.4 U	--	--	0.15 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	1.6 U	--	--	0.18 U	0.18 U
CHLOROETHANE	0.29 U	0.29 U	2.6 U	--	--	0.29 U	0.29 U
CHLOROFORM	0.16 U	0.16 U	1.5 U	--	--	0.16 U	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	2.7 U	--	--	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	2	2.6	360	--	--	0.17 U	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	1.3 U	--	--	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW101B	MRC-MW102A	MRC-MW102B	MRC-MW103A	MRC-MW103B	MRC-MW104A	MRC-MW104B
SAMPLE ID	MRC-MW101B-032013	MRC-MW102A-032013	MRC-MW102B-032013	MRC-MW103A-032713	MRC-MW103B-032713	MRC-MW104A-032113	MRC-MW104B-032113
SAMPLE DATE	3/20/2013	3/20/2013	3/20/2013	3/27/2013	3/27/2013	3/21/2013	3/21/2013
CYCLOHEXANE	--	1.3 NJ	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	2.5 U	--	--	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 UJ	0.31 UJ	2.8 UJ	--	--	0.31 U	0.31 U
DIISOPROPYL ETHER	1.5 U	1.5 U	14 U	--	--	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	1 U	--	--	0.11 U	0.11 U
ETHYLBENZENE	0.17 U	0.17 U	1.5 U	--	--	0.17 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	2.7 U	--	--	0.3 U	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
M+P-XYLENES	0.24 U	0.24 U	2.2 U	--	--	0.24 U	0.24 U
METHYLCYCLOHEXANE	--	0.57 NJ	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	1.5 U	--	--	0.17 U	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	3.6 B	--	--	0.33 U	0.33 U
NAPHTHALENE	0.24 U	0.24 U	2.2 U	--	--	0.24 UJ	0.24 UJ
N-BUTYLBENZENE	0.12 U	0.12 U	1.1 U	--	--	0.12 U	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	1.3 U	--	--	0.14 U	0.14 U
O-XYLENE	0.14 U	0.14 U	1.3 U	--	--	0.14 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
STYRENE	0.11 U	0.11 U	1 U	--	--	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.61 U	--	--	0.067 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	35 UR	--	--	3.9 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	2.6 U	--	--	0.29 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	1.2 U	--	--	0.13 U	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	2.5 U	--	--	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	3.1 J	--	--	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	1.7 U	--	--	0.19 U	0.19 U
TRICHLOROETHENE	2.3	0.17 U	73	--	--	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	0.21 UJ	0.21 UJ	1.9 UJ	--	--	0.21 UJ	0.21 UJ
VINYL ACETATE	0.19 UR	0.19 UR	1.7 UR	--	--	0.19 UR	0.19 UR
VINYL CHLORIDE	0.22 U	0.55 J	2 U	--	--	0.22 U	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	--	--	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	0.17 U	0.17 U	--	--
AROCLOR-1221	--	--	--	0.13 U	0.13 U	--	--
AROCLOR-1232	--	--	--	0.16 U	0.16 U	--	--
AROCLOR-1242	--	--	--	0.22 U	0.22 U	--	--
AROCLOR-1248	--	--	--	0.1 U	0.1 U	--	--
AROCLOR-1254	--	--	--	0.16 U	0.16 U	--	--
AROCLOR-1260	--	--	--	0.17 U	0.17 U	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW101B	MRC-MW102A	MRC-MW102B	MRC-MW103A	MRC-MW103B	MRC-MW104A	MRC-MW104B
SAMPLE ID	MRC-MW101B-032013	MRC-MW102A-032013	MRC-MW102B-032013	MRC-MW103A-032713	MRC-MW103B-032713	MRC-MW104A-032113	MRC-MW104B-032113
SAMPLE DATE	3/20/2013	3/20/2013	3/20/2013	3/27/2013	3/27/2013	3/21/2013	3/21/2013
METALS (UG/L)							
ANTIMONY	--	--	0.3 U	--	--	--	0.3 U
ARSENIC	--	--	0.9 U	--	--	--	0.9 U
BARIUM	--	--	49	--	--	--	59
BERYLLIUM	--	--	16	--	--	--	11
CADMIUM	--	--	1.2	--	--	--	0.65 J
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	--	0.9 U	--	--	--	2.3
COBALT	--	--	450	--	--	--	72
COPPER	--	--	2.7	--	--	--	13
IRON	--	--	--	--	--	--	--
LEAD	--	--	0.42 J	--	--	--	0.21 J
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	--	0.1 UL	--	--	--	0.1 UL
MOLYBDENUM	--	--	0.2 U	--	--	--	1.1 B
NICKEL	--	--	630	--	--	--	79
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	--	0.68 J	--	--	--	2.8 J
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	--	--	0.1 U	--	--	--	0.39 B
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	--	0.2 U	--	--	--	0.2 U
VANADIUM	--	--	0.8 U	--	--	--	0.8 U
ZINC	--	--	760	--	--	--	240 K
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW105A	MRC-MW106B/C	MRC-MW107B/C	MRC-MW109A	MRC-MW109B	MRC-MW110A	MRC-MW110B
SAMPLE ID	MRC-MW-105A-032013	MRC-MW106B/C-040113	MRC-MW107B/C-040113	MRC-MW-109A-040513	MRC-MW-109B-040113	MRC-MW-110A-032613	MRC-MW-110B-032613
SAMPLE DATE	3/20/2013	4/1/2013	4/1/2013	4/5/2013	4/1/2013	3/26/2013	3/26/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	--	0.23 U	0.23 U	1.2 U	0.77 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	--	0.22 U	0.22 U	1.1 U	0.73 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	--	0.18 U	0.18 U	0.9 U	0.6 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	--	0.28 U	0.28 U	1.4 U	0.93 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	--	0.15 U	0.15 U	0.75 U	0.5 U	0.6 J	0.15 U
1,1-DICHLOROETHENE	--	0.39 J	0.19 U	5.1	0.63 U	0.69 J	0.2 J
1,1-DICHLOROPROPENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	--	0.17 U	0.17 U	0.85 U	0.57 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	--	0.43 U	0.43 U	2.2 U	1.4 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	--	0.0059 U	0.0059 U	0.03 U	0.39 J	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	--	0.15 U	0.15 U	0.75 U	0.5 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	--	0.12 U	0.12 U	0.6 U	0.4 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	--	0.67 U	0.67 U	3.4 U	2.2 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	--	0.24 U	0.24 U	1.2 U	0.8 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	--	0.22 U	0.22 U	1.1 U	1.2 J	0.22 U	0.22 U
1,2-DICHLOROPROPANE	--	0.18 U	0.18 U	0.9 U	0.6 U	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	--	0.14 U	0.14 U	0.7 U	0.47 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	--	0.16 U	0.16 U	0.8 U	0.53 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
2-BUTANONE	--	0.57 U	0.57 U	2.9 U	1.9 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	--	0.99 U	0.99 U	5 UR	3.3 U	0.99 U	0.99 U
2-CHLOROTOLUENE	--	0.11 U	0.11 U	0.55 U	0.37 U	0.11 U	0.11 U
2-HEXANONE	--	0.41 U	0.41 U	2.1 U	1.4 U	0.41 U	0.41 U
2-NITROPROPANE	--	--	--	--	3.6 NJ	--	--
4-CHLOROTOLUENE	--	0.18 U	0.18 U	0.9 U	0.6 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	--	0.12 U	0.12 U	0.6 U	0.4 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	--	0.32 U	0.32 U	1.6 U	1.1 U	0.32 U	0.32 U
ACETONE	--	1.1 U	1.1 U	5.5 U	3.7 U	1.1 U	2.7 B
BENZENE	--	0.13 U	0.13 U	0.65 U	37	1.8	3.3
BROMOBENZENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	--	0.29 U	0.29 U	1.5 U	0.97 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	--	0.15 U	0.15 U	0.75 U	0.5 U	0.15 U	0.15 U
BROMOFORM	--	0.64 U	0.64 U	3.2 U	2.1 U	0.64 U	0.64 U
BROMOMETHANE	--	0.41 U	0.41 U	2.1 U	1.4 U	0.41 U	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	--	0.4 J	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
CHLOROBENZENE	--	0.15 U	0.15 U	0.75 U	0.5 U	0.15 U	0.15 U
CHLORODIBROMOMETHANE	--	0.18 U	0.18 U	0.9 U	0.6 U	0.18 U	0.18 U
CHLOROETHANE	--	0.29 U	0.29 U	1.5 U	0.97 U	0.29 U	0.29 U
CHLOROFORM	--	0.36 J	0.16 U	0.8 U	0.53 U	0.26 J	0.22 J
CHLOROMETHANE	--	0.3 U	0.3 U	1.5 U	1 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	--	0.4 J	0.17 U	110	43	9.6	4.3
CIS-1,3-DICHLOROPROPENE	--	0.14 U	0.14 U	0.7 U	0.47 U	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW105A	MRC-MW106B/C	MRC-MW107B/C	MRC-MW109A	MRC-MW109B	MRC-MW110A	MRC-MW110B
SAMPLE ID	MRC-MW-105A-032013	MRC-MW106B/C-040113	MRC-MW107B/C-040113	MRC-MW-109A-040513	MRC-MW-109B-040113	MRC-MW-110A-032613	MRC-MW-110B-032613
SAMPLE DATE	3/20/2013	4/1/2013	4/1/2013	4/5/2013	4/1/2013	3/26/2013	3/26/2013
CYCLOHEXANE	--	--	--	--	--	--	0.12 NJ
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	--	0.28 U	0.28 U	1.4 U	0.93 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	--	0.31 U	0.31 U	1.6 U	1 U	0.31 UJ	0.31 UJ
DIISOPROPYL ETHER	--	1.5 U	1.5 U	7.5 U	5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	--	0.11 U	0.11 U	0.55 U	0.37 U	0.11 U	0.11 U
ETHYLBENZENE	--	0.17 U	0.17 U	0.85 U	0.57 U	0.17 U	0.17 U
HEXACHLOROBUTADIENE	--	0.3 U	0.3 U	1.5 U	1 U	0.3 U	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	--	0.13 U	0.13 U	0.65 U	0.47 J	0.13 U	0.13 U
M+P-XYLENES	--	0.24 U	0.24 U	1.2 U	0.8 U	0.24 U	0.36 J
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	--	0.17 U	0.17 U	0.85 U	4.8	0.17 U	0.3 J
METHYLENE CHLORIDE	--	0.33 U	0.33 U	1.7 U	1.1 U	0.33 U	0.33 U
NAPHTHALENE	--	0.24 U	0.24 U	1.2 U	0.8 U	0.24 U	0.24 U
N-BUTYLBENZENE	--	0.12 U	0.12 U	0.6 U	0.4 U	0.12 U	0.12 U
N-PROPYLBENZENE	--	0.14 U	0.14 U	0.7 U	0.47 U	0.14 U	0.14 U
O-XYLENE	--	0.14 U	0.14 U	0.7 U	1.7 J	0.14 U	0.41 J
PENTANE	--	--	--	--	4.6 NJ	--	--
SEC-BUTYLBENZENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
STYRENE	--	0.11 U	0.11 U	0.55 U	0.37 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	--	0.067 U	0.067 U	0.34 U	0.22 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	--	3.9 UR	3.9 UR	20 UR	13 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	--	0.29 U	0.29 U	1.5 U	0.97 U	0.29 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	0.64 NJ	--
TOLUENE	--	0.13 U	0.13 U	0.65 U	0.43 U	0.13 U	0.13 U
TOTAL XYLENES	--	0.28 U	0.28 U	1.4 U	1.7 J	0.28 U	0.77 J
TRANS-1,2-DICHLOROETHENE	--	0.19 U	0.19 U	2.5 J	4	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	--	0.19 U	0.19 U	0.95 U	0.63 U	0.19 U	0.19 U
TRICHLOROETHENE	--	2.7	0.17 U	0.85 U	15	32	11
TRICHLOROFLUOROMETHANE	--	0.21 U	0.21 U	1.1 U	0.7 U	0.21 U	0.21 U
VINYL ACETATE	--	0.19 UR	0.19 UR	0.95 UR	0.63 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	--	0.22 U	0.22 U	55	0.73 U	0.22 J	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	--	--	--	--	--	1.5	0.91 J
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW105A	MRC-MW106B/C	MRC-MW107B/C	MRC-MW109A	MRC-MW109B	MRC-MW110A	MRC-MW110B
SAMPLE ID	MRC-MW-105A-032013	MRC-MW106B/C-040113	MRC-MW107B/C-040113	MRC-MW-109A-040513	MRC-MW-109B-040113	MRC-MW-110A-032613	MRC-MW-110B-032613
SAMPLE DATE	3/20/2013	4/1/2013	4/1/2013	4/5/2013	4/1/2013	3/26/2013	3/26/2013
METALS (UG/L)							
ANTIMONY	0.3 U	--	0.3 U	0.6 U	0.96 J	0.3 U	0.3 U
ARSENIC	0.9 U	--	0.9 U	1.8 U	0.9 U	0.9 U	0.9 U
BARIUM	53	--	62 J	110	190 J	780	68
BERYLLIUM	3.2	--	0.1 U	0.75 J	1.9	3.1	0.31 J
CADMIUM	0.38 J	--	0.11 J	0.2 U	0.48 J	0.11 J	0.1 U
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	0.9 U	--	0.9 U	13	0.9 U	0.9 U	0.9 U
COBALT	41	--	8.7	28	180	650	100
COPPER	7.8	--	32	210	6.4	0.5 UL	0.56 J
IRON	--	--	--	--	--	--	--
LEAD	0.28 J	--	0.24 J	9.8	0.22 J	0.47 J	0.47 J
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	0.1 UL	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MOLYBDENUM	0.2 U	--	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U
NICKEL	36	--	21	29	280	400 L	83 L
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	2.2 J	--	0.5 U	1 U	0.5 U	0.5 UL	0.5 UL
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	0.1 U	--	0.1 U	0.2 U	0.1 U	0.1 UL	0.1 UL
SODIUM	--	--	--	--	--	--	--
THALLIUM	0.2 U	--	0.2 U	0.4 U	0.2 U	0.2 U	0.2 U
VANADIUM	0.8 U	--	0.8 U	32 J	0.81 J	0.8 U	0.8 U
ZINC	99	--	2500	300 K	1000	280	130
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	0.082 U	0.33 J	0.75	1.2

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-MW111A	MRC-MW111B	MRC-MW112A	MRC-OF01	MRC-OF02A	MRC-OF02B	MRC-OF02C
SAMPLE ID	MRC-MW-111A-042913	MRC-MW-111B-042913	MRC-MW-112A-042413	MRC-OF-01-050813	MRC-OF-02A-050613	MRC-OF-02B-050613	MRC-OF-02C-050613
SAMPLE DATE	4/29/2013	4/29/2013	4/24/2013	5/8/2013	5/6/2013	5/6/2013	5/6/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	3.3 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	3.1 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	2.6 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	4 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	0.15 U	29	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	0.19 U	140	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	2.4 U	0.17 UJ	0.17 UJ	0.17 UJ	0.17 UJ	0.17 UJ
1,2,3-TRICHLOROPROPANE	0.43 U	6.1 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.084 U	0.0059 U	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	2.1 U	0.15 UJ	0.15 U	0.15 UJ	0.15 UJ	0.15 UJ
1,2,4-TRIMETHYLBENZENE	0.12 U	1.7 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	9.6 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	3.4 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	3.1 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	2.6 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	2 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	2.3 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	1.9 U	0.27 J	0.13 U	0.13 U	0.13 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	0.57 U	8.1 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	14 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	0.11 U	1.6 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	0.41 U	5.9 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	2.6 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	1.7 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	4.6 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
ACETONE	1.1 UR	16 UR	1.6 B	1.1 U	1.1 UR	1.1 UR	1.1 UR
BENZENE	0.13 U	2.5 J	0.38 B	0.13 U	0.13 U	0.13 U	0.13 U
BROMOBENZENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	4.1 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	2.1 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	0.64 U	9.1 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	0.41 U	5.9 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	0.15 U	2.1 U	1.8	0.15 U	0.15 U	0.15 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	2.6 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	0.29 U	4.1 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
CHLOROFORM	0.16 U	2.3 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	0.3 U	4.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	39	2.1	0.17 U	0.17 U	0.17 U	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	2 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW111A	MRC-MW111B	MRC-MW112A	MRC-OF01	MRC-OF02A	MRC-OF02B	MRC-OF02C
SAMPLE ID	MRC-MW-111A-042913	MRC-MW-111B-042913	MRC-MW-112A-042413	MRC-OF-01-050813	MRC-OF-02A-050613	MRC-OF-02B-050613	MRC-OF-02C-050613
SAMPLE DATE	4/29/2013	4/29/2013	4/24/2013	5/8/2013	5/6/2013	5/6/2013	5/6/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	4 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 U	4.4 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
DIISOPROPYL ETHER	1.5 U	21 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	1.6 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
ETHYLBENZENE	0.17 U	2.4 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	4.3 U	0.3 UJ	0.3 U	0.3 U	0.3 U	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	0.24 U	3.4 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	2.4 U	0.17 U	1.2	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	0.33 U	11 J	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	0.24 U	3.4 U	0.24 U	0.24 U	0.24 UJ	0.24 UJ	0.24 UJ
N-BUTYLBENZENE	0.12 U	1.7 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	0.14 U	2 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	0.14 U	2 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	0.11 U	1.6 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.96 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	56 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	4.1 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	1.9 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	0.28 U	4 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	2.7 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	2.7 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	0.29 J	460	4.3	0.17 U	0.17 U	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	0.21 U	3 U	0.21 UJ	0.21 U	0.21 U	0.21 U	0.21 U
VINYL ACETATE	0.19 U	2.7 U	0.19 U	0.19 UR	0.19 U	0.19 U	0.19 U
VINYL CHLORIDE	0.22 U	3.1 U	1.4	0.22 U	0.22 U	0.22 U	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.68 J	84	--	0.48 U	0.49 U	0.47 U	0.47 U
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-MW111A	MRC-MW111B	MRC-MW112A	MRC-OF01	MRC-OF02A	MRC-OF02B	MRC-OF02C
SAMPLE ID	MRC-MW-111A-042913	MRC-MW-111B-042913	MRC-MW-112A-042413	MRC-OF-01-050813	MRC-OF-02A-050613	MRC-OF-02B-050613	MRC-OF-02C-050613
SAMPLE DATE	4/29/2013	4/29/2013	4/24/2013	5/8/2013	5/6/2013	5/6/2013	5/6/2013
METALS (UG/L)							
ANTIMONY	--	0.3 U	0.3 U	--	--	--	--
ARSENIC	--	4.1 J	0.9 U	--	--	--	--
BARIUM	--	73	99	--	--	--	--
BERYLLIUM	--	0.34 J	6.8	--	--	--	--
CADMIUM	--	0.1 U	0.1 U	--	--	--	--
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	0.9 U	0.9 U	--	--	--	--
COBALT	--	47	61	--	--	--	--
COPPER	--	0.5 U	0.51 J	--	--	--	--
IRON	--	--	--	--	--	--	--
LEAD	--	0.2 U	0.2 U	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	0.1 UL	0.1 U	--	--	--	--
MOLYBDENUM	--	0.2 U	0.2 U	--	--	--	--
NICKEL	--	84	76	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	0.5 UL	0.5 U	--	--	--	--
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	--	0.1 U	0.1 U	--	--	--	--
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	0.2 U	0.2 U	--	--	--	--
VANADIUM	--	0.8 U	2.7 J	--	--	--	--
ZINC	--	59	96	--	--	--	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-OF03A	MRC-OF03B	MRC-OF03C	MRC-OF04A	MRC-OF04B	MRC-OF04B	MRC-OF04C
SAMPLE ID	MRC-OF-03A-050713	MRC-OF-03B-050713	MRC-OF-03C-050713	MRC-OF04A-050713	MRC-OF04B-050713	MRC-OF04B-050713	MRC-OF04C-050713
SAMPLE DATE	5/7/2013	5/7/2013	5/7/2013	5/7/2013	5/7/2013	5/9/2013	5/7/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	--	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	--	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	--	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	--	0.28 U
1,1-DICHLOROETHANE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--	0.15 U
1,1-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	--	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 UJ	0.17 UJ	0.17 UJ	0.17 UJ	0.17 UJ	--	0.17 UJ
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	--	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.0059 U	0.0059 U	0.0059 U	--	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	--	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	--	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	--	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	--	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.58 J
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
2-BUTANONE	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	--	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	--	0.99 U
2-CHLOROTOLUENE	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	0.11 U
2-HEXANONE	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	--	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	--	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	--	0.32 U
ACETONE	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	--	1.1 U
BENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
BROMOBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	--	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--	0.15 U
BROMOFORM	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	--	0.64 U
BROMOMETHANE	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	--	0.41 U
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	--	0.18 U
CHLOROETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	--	0.29 U
CHLOROFORM	0.16 U	0.16 U	0.16 U	0.19 J	0.16 U	--	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-OF03A	MRC-OF03B	MRC-OF03C	MRC-OF04A	MRC-OF04B	MRC-OF04B	MRC-OF04C
SAMPLE ID	MRC-OF-03A-050713	MRC-OF-03B-050713	MRC-OF-03C-050713	MRC-OF04A-050713	MRC-OF04B-050713	MRC-OF04B-050713	MRC-OF04C-050713
SAMPLE DATE	5/7/2013	5/7/2013	5/7/2013	5/7/2013	5/7/2013	5/9/2013	5/7/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	--	0.28 U
DICHLORODIFLUOROMETHANE	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	--	0.31 U
DIISOPROPYL ETHER	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	--	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	0.11 U
ETHYLBENZENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--	0.17 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
M+P-XYLENES	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	--	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	--	0.33 U
NAPHTHALENE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	--	0.24 U
N-BUTYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	0.14 U
O-XYLENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
STYRENE	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	--	0.067 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR	--	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	--	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	--	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	--	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	--	0.19 U
TRICHLOROETHENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	--	0.17 U
TRICHLOROFLUOROMETHANE	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	--	0.21 U
VINYL ACETATE	0.19 UR	0.19 UR	0.19 UR	0.19 UR	0.19 UR	--	0.19 UR
VINYL CHLORIDE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	--	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.47 U	0.47 U	0.5 U	0.47 U	0.49 U	4.8 U	--
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-OF03A	MRC-OF03B	MRC-OF03C	MRC-OF04A	MRC-OF04B	MRC-OF04B	MRC-OF04C
SAMPLE ID	MRC-OF-03A-050713	MRC-OF-03B-050713	MRC-OF-03C-050713	MRC-OF04A-050713	MRC-OF04B-050713	MRC-OF04B-050713	MRC-OF04C-050713
SAMPLE DATE	5/7/2013	5/7/2013	5/7/2013	5/7/2013	5/7/2013	5/9/2013	5/7/2013
METALS (UG/L)							
ANTIMONY	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--
MOLYBDENUM	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION	MRC-OF05A	MRC-OF05B	MRC-OF05C	MRC-OF06A	MRC-OF06B	MRC-OF06C	MRC-OF07
SAMPLE ID	MRC-OF-05A-050213	MRC-OF-05B-050213	MRC-OF-05C-050213	MRC-OF-06A-050113	MRC-OF-06B-050113	MRC-OF-06C-050113	MRC-OF07-043013
SAMPLE DATE	5/2/2013	5/2/2013	5/2/2013	5/1/2013	5/1/2013	5/1/2013	4/30/2013
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 UJ
1,1-DICHLOROETHANE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 UJ	0.0059 U	0.0059 UJ	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1-PENTENE	--	--	--	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U
2-NITROPROPANE	--	--	--	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
ACETONE	1.4 J	11	2.1 J	1.1 U	1.1 U	1.1 U	1.1 U
BENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.2 B
BROMOBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 UJ
BUTANE	--	--	--	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
CHLOROFORM	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-OF05A	MRC-OF05B	MRC-OF05C	MRC-OF06A	MRC-OF06B	MRC-OF06C	MRC-OF07
SAMPLE ID	MRC-OF-05A-050213	MRC-OF-05B-050213	MRC-OF-05C-050213	MRC-OF-06A-050113	MRC-OF-06B-050113	MRC-OF-06C-050113	MRC-OF07-043013
SAMPLE DATE	5/2/2013	5/2/2013	5/2/2013	5/1/2013	5/1/2013	5/1/2013	4/30/2013
CYCLOHEXANE	--	--	--	--	--	--	--
CYCLOHEXENE	--	--	--	--	--	--	--
CYCLOPENTANE	--	--	--	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 UJ
DIISOPROPYL ETHER	1.5 UJ	1.5 U	1.5 UJ	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 UJ	0.11 U	0.11 UJ	0.11 U	0.11 U	0.11 U	0.11 U
ETHYLBENZENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
HEXANE	--	--	--	--	--	--	--
ISOBUTANE	--	--	--	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
N-BUTYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
PENTANE	--	--	--	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 UJ	0.067 U	0.067 UJ	0.067 U	0.067 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U	0.29 U
TETRAHYDROFURAN	--	--	--	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	0.21 U	0.21 U	0.21 U	0.21 UJ	0.21 UJ	0.21 UJ	0.21 UJ
VINYL ACETATE	0.19 UR	0.19 U	0.19 UR	0.19 UR	0.19 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
VOLATILE GASES (UG/L)							
ETHANE	--	--	--	--	--	--	--
ETHENE	--	--	--	--	--	--	--
METHANE	--	--	--	--	--	--	--
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	0.47 U	0.47 U	0.48 U	0.49 UJ	0.5 UJ	0.47 UJ	0.47 U
PCBS (UG/L)							
AROCLOR-1016	--	--	--	--	--	--	--
AROCLOR-1221	--	--	--	--	--	--	--
AROCLOR-1232	--	--	--	--	--	--	--
AROCLOR-1242	--	--	--	--	--	--	--
AROCLOR-1248	--	--	--	--	--	--	--
AROCLOR-1254	--	--	--	--	--	--	--
AROCLOR-1260	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-OF05A	MRC-OF05B	MRC-OF05C	MRC-OF06A	MRC-OF06B	MRC-OF06C	MRC-OF07
SAMPLE ID	MRC-OF-05A-050213	MRC-OF-05B-050213	MRC-OF-05C-050213	MRC-OF-06A-050113	MRC-OF-06B-050113	MRC-OF-06C-050113	MRC-OF07-043013
SAMPLE DATE	5/2/2013	5/2/2013	5/2/2013	5/1/2013	5/1/2013	5/1/2013	4/30/2013
METALS (UG/L)							
ANTIMONY	--	--	--	--	--	--	--
ARSENIC	--	--	--	--	--	--	--
BARIUM	--	--	--	--	--	--	--
BERYLLIUM	--	--	--	--	--	--	--
CADMIUM	--	--	--	--	--	--	--
CALCIUM	--	--	--	--	--	--	--
CHROMIUM	--	--	--	--	--	--	--
COBALT	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--
IRON	--	--	--	--	--	--	--
LEAD	--	--	--	--	--	--	--
MAGNESIUM	--	--	--	--	--	--	--
MANGANESE	--	--	--	--	--	--	--
MERCURY	--	--	--	--	--	--	--
MOLYBDENUM	--	--	--	--	--	--	--
NICKEL	--	--	--	--	--	--	--
POTASSIUM	--	--	--	--	--	--	--
SELENIUM	--	--	--	--	--	--	--
SILICON DIOXIDE	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--
SODIUM	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--
VANADIUM	--	--	--	--	--	--	--
ZINC	--	--	--	--	--	--	--
MISCELLANEOUS PARAMETERS							
ALKALINITY (MG/L)	--	--	--	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--	--	--	--
SULFATE (MG/L)	--	--	--	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-OF08A	MRC-OF08B	MRC-OF08C	MRC-OF08D
SAMPLE ID	MRC-OF08A-050113	MRC-OF08B-050113	MRC-OF08C-050113	MRC-OF08D-050113
SAMPLE DATE	5/1/2013	5/1/2013	5/1/2013	5/1/2013
VOLATILES (UG/L)				
1,1,1,2-TETRACHLOROETHANE	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28 U	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	0.22 U	0.22 U	0.22 U	0.22 U
1,2-DICHLOROPROPANE	0.18 U	0.18 U	0.18 U	0.18 U
1,3,5-TRIMETHYLBENZENE	--	--	--	--
1,3-DICHLOROBENZENE	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	0.13 U	0.13 U	0.13 U	0.13 U
1-PENTENE	--	--	--	--
2,2-DICHLOROPROPANE	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	0.57 U	0.57 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	0.99 U	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	0.41 U	0.41 U	0.41 U	0.41 U
2-NITROPROPANE	--	--	--	--
4-CHLOROTOLUENE	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	0.32 U	0.32 U	0.32 U	0.32 U
ACETONE	1.1 U	1.1 U	1.1 U	1.1 U
BENZENE	0.13 U	0.13 U	0.13 U	0.13 U
BROMOBENZENE	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	0.41 U	0.41 U	0.41 U	0.41 U
BUTANE	--	--	--	--
CARBON DISULFIDE	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	0.15 U	0.15 U	0.15 U	0.15 U
CHLORODIBROMOMETHANE	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	0.29 U	0.29 U	0.29 U	0.29 U
CHLOROFORM	0.16 U	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	0.17 U	0.17 U	0.17 U	0.17 U
CIS-1,3-DICHLOROPROPENE	0.14 U	0.14 U	0.14 U	0.14 U

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION SAMPLE ID SAMPLE DATE	MRC-OF08A MRC-OF08A-050113 5/1/2013	MRC-OF08B MRC-OF08B-050113 5/1/2013	MRC-OF08C MRC-OF08C-050113 5/1/2013	MRC-OF08D MRC-OF08D-050113 5/1/2013
CYCLOHEXANE	--	--	--	--
CYCLOHEXENE	--	--	--	--
CYCLOPENTANE	--	--	--	--
DIBROMOMETHANE	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	0.31 U	0.31 U	0.31 U	0.31 U
DIISOPROPYL ETHER	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	0.11 U	0.11 U	0.11 U	0.11 U
ETHYLBENZENE	0.17 U	0.17 U	0.17 U	0.17 U
HEXACHLOROBUTADIENE	0.3 U	0.3 U	0.3 U	0.3 U
HEXANE	--	--	--	--
ISOBUTANE	--	--	--	--
ISOPROPYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	0.24 U	0.24 U	0.24 U	0.24 U
METHYLCYCLOHEXANE	--	--	--	--
METHYL TERT-BUTYL ETHER	0.17 U	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	0.24 U	0.24 U	0.24 U	0.24 U
N-BUTYLBENZENE	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	0.14 U	0.14 U	0.14 U	0.14 U
PENTANE	--	--	--	--
SEC-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	0.067 U	0.067 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	3.9 UR	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	0.29 U	0.29 U	0.29 U	0.29 U
TETRAHYDROFURAN	--	--	--	--
TOLUENE	0.13 U	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	0.28 U	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	0.19 U	0.19 U	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	0.17 U	0.17 U	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	0.21 UJ	0.21 U	0.21 U	0.21 UJ
VINYL ACETATE	0.19 UR	0.19 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	0.22 U	0.22 U	0.22 U	0.22 U
VOLATILE GASES (UG/L)				
ETHANE	--	--	--	--
ETHENE	--	--	--	--
METHANE	--	--	--	--
SEMIVOLATILES (UG/L)				
1,4-DIOXANE	1.1 UJ	0.49 UJ	0.49 UJ	0.49 UJ
PCBS (UG/L)				
AROCLOR-1016	--	--	--	--
AROCLOR-1221	--	--	--	--
AROCLOR-1232	--	--	--	--
AROCLOR-1242	--	--	--	--
AROCLOR-1248	--	--	--	--
AROCLOR-1254	--	--	--	--
AROCLOR-1260	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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LOCATION	MRC-OF08A	MRC-OF08B	MRC-OF08C	MRC-OF08D
SAMPLE ID	MRC-OF08A-050113	MRC-OF08B-050113	MRC-OF08C-050113	MRC-OF08D-050113
SAMPLE DATE	5/1/2013	5/1/2013	5/1/2013	5/1/2013
METALS (UG/L)				
ANTIMONY	--	--	--	--
ARSENIC	--	--	--	--
BARIUM	--	--	--	--
BERYLLIUM	--	--	--	--
CADMIUM	--	--	--	--
CALCIUM	--	--	--	--
CHROMIUM	--	--	--	--
COBALT	--	--	--	--
COPPER	--	--	--	--
IRON	--	--	--	--
LEAD	--	--	--	--
MAGNESIUM	--	--	--	--
MANGANESE	--	--	--	--
MERCURY	--	--	--	--
MOLYBDENUM	--	--	--	--
NICKEL	--	--	--	--
POTASSIUM	--	--	--	--
SELENIUM	--	--	--	--
SILICON DIOXIDE	--	--	--	--
SILVER	--	--	--	--
SODIUM	--	--	--	--
THALLIUM	--	--	--	--
VANADIUM	--	--	--	--
ZINC	--	--	--	--
MISCELLANEOUS PARAMETERS				
ALKALINITY (MG/L)	--	--	--	--
AMMONIA-N (MG/L)	--	--	--	--
CHLORIDE (MG/L)	--	--	--	--
DISSOLVED ORGANIC CARBON (MG/L)	--	--	--	--
NITRATE-N (MG/L)	--	--	--	--
NITRITE-N (MG/L)	--	--	--	--
ORTHOPHOSPHATE-P (MG/L)	--	--	--	--
SULFATE (MG/L)	--	--	--	--
TOTAL DISSOLVED SOLIDS (MG/L)	--	--	--	--
PERCHLORATE (UG/L)	--	--	--	--

TABLE E-1

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, MARCH-MAY 2013
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

-- - Not analyzed
B - Laboratory blank contamination.
J - Positive result is considered estimated as a result of technical noncompliance.
K - Positive result is considered to be biased high as a result of technical noncompliance.
L - Positive result is considered to be biased low as a result of technical noncompliance.
MG/L = milligrams per liter.
U - Not detected at listed detection limit.
UG/L - micrograms per liter.
UJ - Nondetected value considered to be estimated as a result of technical noncompliance.
UL - Nondetected value considered to be biased low as a result of technical noncompliance.
UR - Nondetected value rejected as a result of technical noncompliance.