Technical Memorandum: March 2011 Surface Water Sampling Results for Frog Mortar Creek Martin State Airport 701 Wilson Point Road Middle River, Maryland

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March 2012

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ACRONYMS

AWQC	Ambient Water Quality Criteria
BTAG	Biological Technical Advisory Group
cis-1,2-DCE	*cis*-1,2-dichloroethene
COC	chain of custody
cVOC	chlorinated volatile organic compound
DRA	Dump Road Area
GIS	geographic information system
GPS	global positioning system
HASP	health and safety plan
IDW	investigation-derived waste
Lockheed Martin	Lockheed Martin Corporation
MAA	Maryland Aviation Administration
MDE	Maryland Department of the Environment
MSA	Martin State Airport
µg/L	microgram(s) per liter
NRWQC	National Recommended Water Quality Criteria
PAHs	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyl
PDF	portable document format
PM	project manager
PPE	personal protective equipment
RI	remedial investigation
SVOC	semivolatile organic compound
TCE	trichloroethene
Tetra Tech	Tetra Tech, Inc.
USEPA	U.S. Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound

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Section 1
Introduction

On behalf of Lockheed Martin Corporation (Lockheed Martin), Tetra Tech, Inc. (Tetra Tech) has prepared this technical memorandum to detail work conducted as part of the *2011 Groundwater Monitoring Work Plan* (Tetra Tech, 2011a) for the Dump Road Area (DRA), Martin State Airport (MSA), Middle River, Maryland (see Figure 1-1). This technical memorandum presents the results of surface water samples collected from Frog Mortar Creek in March 2011. The objectives of the March 2011 sampling event were to:

- provide surface water quality data to determine the extent of water quality criteria exceedances detected during the July 2010 Frog Mortar Creek sampling
- evaluate the interaction between shallow groundwater and Frog Mortar Creek
- provide information that can be used to update the modeling of shallow groundwater-flow patterns and discharge to Frog Mortar Creek

This technical memorandum is organized as follows:

Section 2—Site Background: Briefly describes the site and where detailed background information and previous investigations can be found.

Section 3—Investigation Approach and Methodology: Presents the technical approach used for the surface water sampling and describes the field methodology employed.

Section 4—Results: Presents the investigation findings.

Section 5—Summary: Summarizes the investigation program and results.

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

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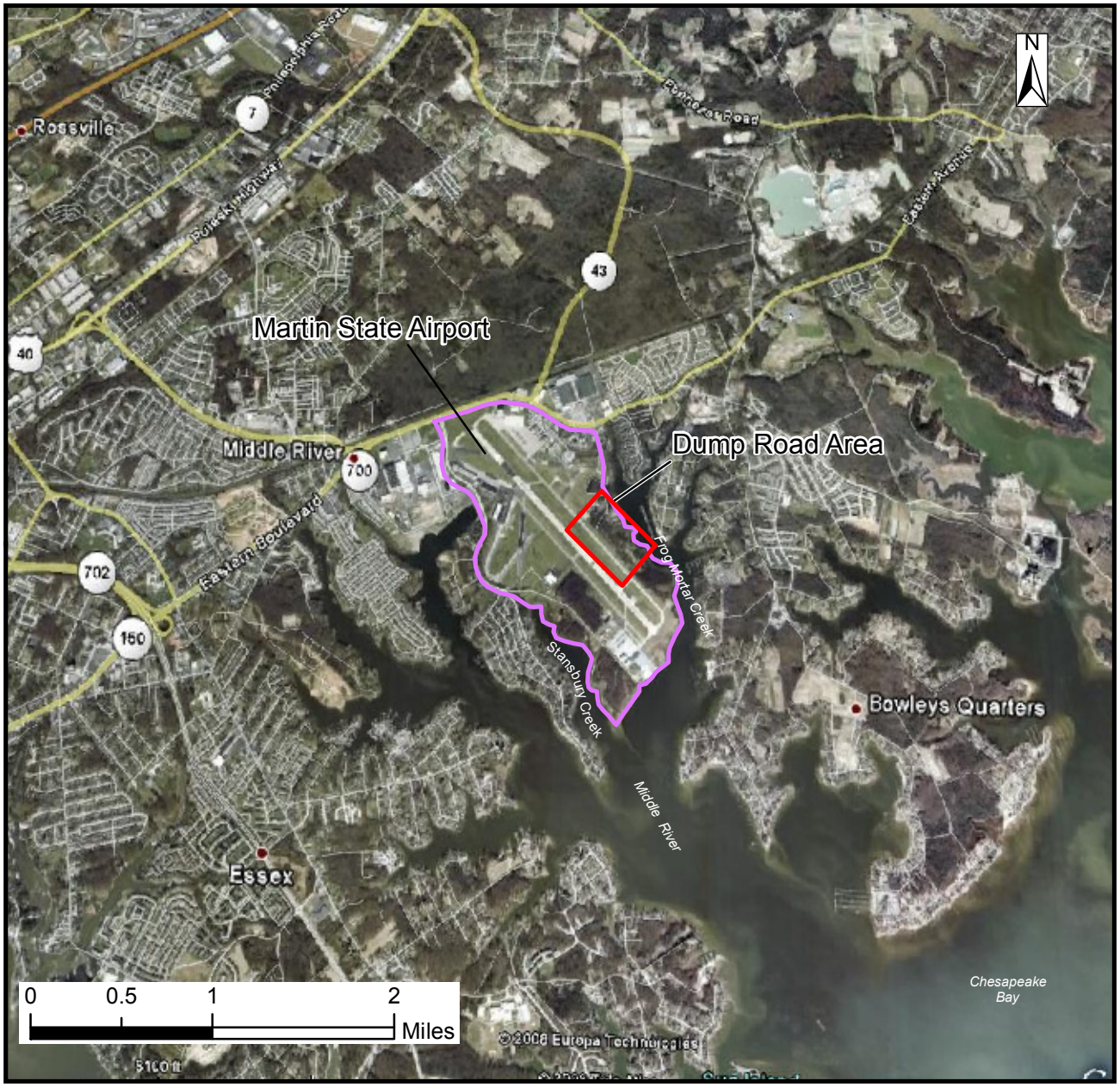

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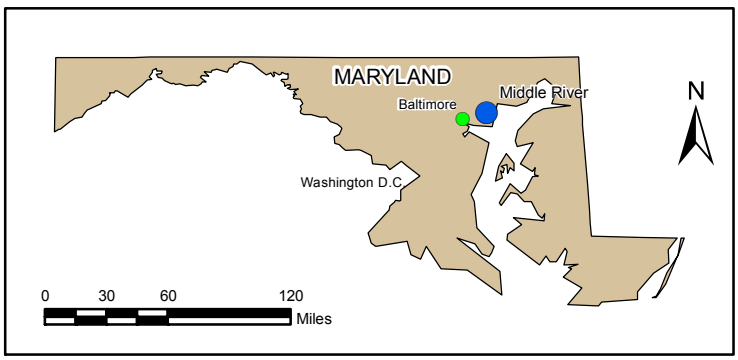

FIGURE 1-1

MARTIN STATE AIRPORT, DUMP ROAD AREA, AND FROG MORTAR CREEK LOCATION MAP

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
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Section 2
Site Background

2.1 OVERVIEW

Martin State Airport (MSA) is located at 701 Wilson Point Road in Middle River, Maryland and is bounded by Frog Mortar Creek to the east and Stansbury Creek and Dark Head Cove to the west (Figure 2-1). Both creeks are tidal tributaries of the Chesapeake Bay. The area under investigation is Frog Mortar Creek, which is east of and adjacent to the Dump Road Area (DRA) site at the MSA. Environmental investigations of the Dump Road Area (DRA) began in 1989 when the Maryland Department of the Environment (MDE) conducted a preliminary assessment of MSA. During the 1930s, 1940s, and 1950s, the Glenn L. Martin Aircraft Company reportedly used a sand pit under the current Taxiway Tango to dump spent battery acid, acid-type strippers and other acidic solutions, and dredge spoils and construction debris. The U.S. Environmental Protection Agency (USEPA) concluded after a review of the preliminary assessment that no signs of waste disposal were apparent, and the site was classified as "No Further Remedial Action Planned."

In July 1991, four drums containing dried zinc-chromate paint were uncovered during installation of underground electric cables adjacent to Taxiway Tango, prompting MDE to order additional studies (MDE, 1992 and 1997). The Maryland Aviation Administration (MAA), the owner of the airport at this time, removed the drums discovered near Taxiway Tango in 1991 and conducted environmental studies from 1991–1998 including geophysical surveys to locate and identify buried materials, and sampling and chemical analyses of soil, groundwater, surface water, and sediment. These initial investigations identified four areas of concern at MSA: the Taxiway Tango Median Anomaly Area, the Drum Area, two ponds (Pond 1 and Pond 2), and the Petroleum Hydrocarbon Area (Figure 2-2).

From 1999–2009, the Lockheed Martin Corporation (Lockheed Martin), the successor entity of the Glenn L. Martin Aircraft Company, conducted a remedial investigation (RI) of the DRA (Tetra Tech, Inc. [Tetra Tech], 2010a). Supplemental RI studies of the DRA were also conducted by Lockheed Martin in 2010 and 2011 (Tetra Tech 2010a-c, 2011b-d, 2012a,b) to further delineate the

extent of soil, groundwater, and sediment chemical impacts indicated by the earlier studies. Through geophysical surveys, test pits, soil borings, and soil-sample chemical analyses, the RI and supplemental studies identified surface and subsurface-soil contamination from buried fill material. The fill material consisted of soil, stained soil, and debris, the latter of which is comprised of concrete rubble and disposed industrial items (e.g., batteries, decomposed drums, tires, paint cans, burnt items, sludge, buckets, glass, wood, etc.). Volatile organic compounds (VOC), semivolatile organic compounds (SVOC) (primarily polycyclic aromatic-hydrocarbons [PAHs]), and several metals were detected in soils at concentrations exceeding human health risk screening levels. Chlorinated VOCs (cVOCs) (trichloroethene [TCE]) and its degradation products, petroleum VOCs (e.g., benzene, etc.), and metals were also found in surficial-aquifer groundwater at concentrations exceeding Maryland groundwater and drinking water standards. Complete details of the site background, including previous investigations, descriptions of site geology and hydrogeology, and current conditions are provided in the RI (Tetra Tech, 2010a).

2.2 PREVIOUS FROG MORTAR CREEK INVESTIGATIONS

2.2.1 1997 Investigation

MAA conducted an investigation in late 1997 to evaluate potential contamination of surface water and bottom sediments in Frog Mortar Creek east of and hydraulically downgradient of the DRA (Apex Environmental, 1998). Six sediment and nine surface water samples were collected along three transects in Frog Mortar Creek, as shown in Figure 2-3. Surface water and sediment samples were analyzed for VOCs, SVOCs, metals, cyanide, and pH (a measure of the acidity or alkalinity of a substance).

SVOCs and cyanide were not detected in the surface water samples. The only detected VOC, methylene chloride, is considered a common laboratory contaminant. Several SVOCs, primarily PAHs, and metals were detected in the sediment samples. Several metals exceeded comparison criteria in surface water samples, and copper was detected at high concentrations in sediment samples. However, the Maryland Environmental Service (MAA's consultant at the time of the investigation) determined that SVOC concentrations in sediment were comparable to background levels found in other sediment samples collected in the Chesapeake Bay, and that they posed no public health or environmental concerns with respect to surface water or bottom sediment quality. An MDE memorandum dated August 20, 1998 (MDE, 1998) reviewed the surface water and

sediment data and concluded that exposure concentrations were within USEPA-recommended levels of risk.

2.2.2 2004 Investigation

In July 2004, Tetra Tech collected sediment and surface water samples from Frog Mortar Creek to provide quality data for risk assessment. Two sediment and two surface water samples were collected within 50 feet of the DRA shoreline. These locations were selected based on extensive groundwater sampling and modeling, which indicated the direction of the on-site VOC plume toward Frog Mortar Creek. Sampling locations are shown in Figure 2-4.

The sediment and surface water samples were analyzed for inorganic constituents, VOCs, SVOCs, polychlorinated biphenyls, and pesticides. Very low concentrations of VOCs and reportable concentrations of various metals were detected in surface water and sediment samples. These data were used to assess risk to recreational users of Frog Mortar Creek. The results of the human health risk assessment indicate that contacting sediments and surface water in Frog Mortar Creek while recreating did not pose a significant cancer risk or health hazard to adults, youth, and child recreational users (Tetra Tech, 2006).

2.2.3 2007–2008 Investigation

In 2007–2008, Tetra Tech completed a three-phase investigation of surface water and sediment in Frog Mortar Creek (Tetra Tech, 2009) to identify and sample areas of groundwater discharge into Frog Mortar Creek, to assess potential impacts to the sediment and surface water, and to assess whether contaminants may have historically migrated from the site into Frog Mortar Creek via surface erosion. The three-phase investigation included the following tasks: Phase I identified locations where groundwater discharged to surface water using a Trident™ probe. Phase II sampled surface water and shallow sediment at locations identified in Phase I as possible groundwater discharge points. Phase III sampled deeper sediment at locations identified in Phase II as potentially affected. Sampling locations for the three phases of this investigation are shown in Figures 2-5 through 2-7.

The results of the Phase I Trident™ study identified the likely presence of groundwater discharge at the southern end of the groundwater plume at the DRA. The Phase II investigation indicated that groundwater discharge appeared to be affecting surface water and sediment in Frog Mortar

Creek east of the DRA. The Phase III investigation confirmed the Phase II results, but also indicated that metal and PAH impacts are widespread in the Frog Mortar Creek system, including upstream locations.

The 2007–2008 investigation concluded that cVOC groundwater contamination was affecting surface water and sediment upon discharge at locations adjacent to and east of the DRA. These locations are within the lateral boundaries of the groundwater plume and known fill area at the DRA. The sediment sampling and analyses found the highest concentrations of cVOCs known to be associated with groundwater in sediments adjacent to the site, that the highest concentrations of metals are typically found at background locations, and the highest concentrations of PAHs are found in Frog Mortar Creek north of the site.

Several concentrations of metals in surface water exceeded USEPA Ambient Water Quality Criteria (AWQC). Concentrations of these metals were consistent in Frog Mortar Creek, did not appear to be associated with known MSA contaminant sources, and did not appear to represent a high level of potential risk. Most metals appeared to be in dissolved form and not adsorbed to suspended material in the water column.

The 2007–2008 study concluded that surface water concentrations of PAHs and metals appeared to be associated with typical sources within active water bodies such as Frog Mortar Creek, including metals from marine paint, PAHs from boat exhaust and oil discharge, as well as runoff from land sources. Only Gar Gut, an embayment of Frog Mortar Creek to the north, demonstrated impacts that may not be associated with these typical types of contaminant sources in Frog Mortar Creek and thus may represent a separate source. Gar Gut was found to have localized elevated concentrations of VOCs, PAHs, and metals in surface water and elevated concentrations of PAHs in sediment. The types and concentrations of contaminants at this location have a different signature than contamination found at other locations. Based on the results of the 2007-2008 investigation, MDE issued a letter confirming no remediation requirements for sediment and surface water are necessary in Frog Mortar Creek (MDE, 2010).

2.2.4 2010 Investigation

As a part of the July 2010 groundwater and surface water-sampling program, three surface water samples were collected along the western shoreline of Frog Mortar Creek near the DRA (Tetra

Tech, 2010c). The 2010 sampling locations are shown in Figure 2-8. Sample MSA-SW38 was collected northeast of wells DMW2A/B, near the center of the DRA groundwater VOC plumes. Samples MSA-SW37 and MSA-SW39 were collected north and south of the DRA, respectively. Sample MSA-SW38 reflects near-shore surface water quality in a locale hydraulically downgradient of the DRA VOC groundwater plume. Primary site groundwater contaminants TCE, *cis*-1,2-dichloroethene (*cis*-1,2-DCE), vinyl chloride (VC), and 1,4-dioxane were detected in sample MSA-SW38, as well as low concentrations of three other DRA groundwater VOCs: 1,2,4-trichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene. These results indicate that VOC-impacted groundwater from the DRA discharges to Frog Mortar Creek. Other site VOCs, such as benzene, toluene, ethylbenzene, xylene, chlorobenzene, and other chlorobenzene isomers, were not detected in the Frog Mortar Creek surface water samples collected in 2010. Hexavalent chromium was detected in the three surface water samples at low concentrations below the ecological and human health screening levels. The 2010 surface water results, showing increased concentrations of some constituents of concern, prompted Lockheed Martin and MDE to agree to a more frequent sampling and analysis of surface water in 2011. This report is an outcome off that agreement to conduct more frequent sampling and analysis of Frog Mortar Creek.

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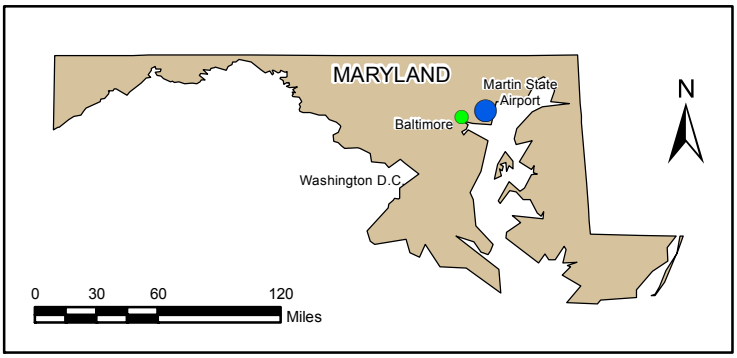

FIGURE 2-1

MARTIN STATE AIRPORT AND SURROUNDING FEATURES

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

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FIGURE 2-2

AREAS OF CONCERN
DUMP ROAD AND RUNWAY AREA

LEGEND

POND

MARYLAND AIR NATIONAL GUARD BOUNDARY

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 1/13/12

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FIGURE 2-3

1997 SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 500 Feet

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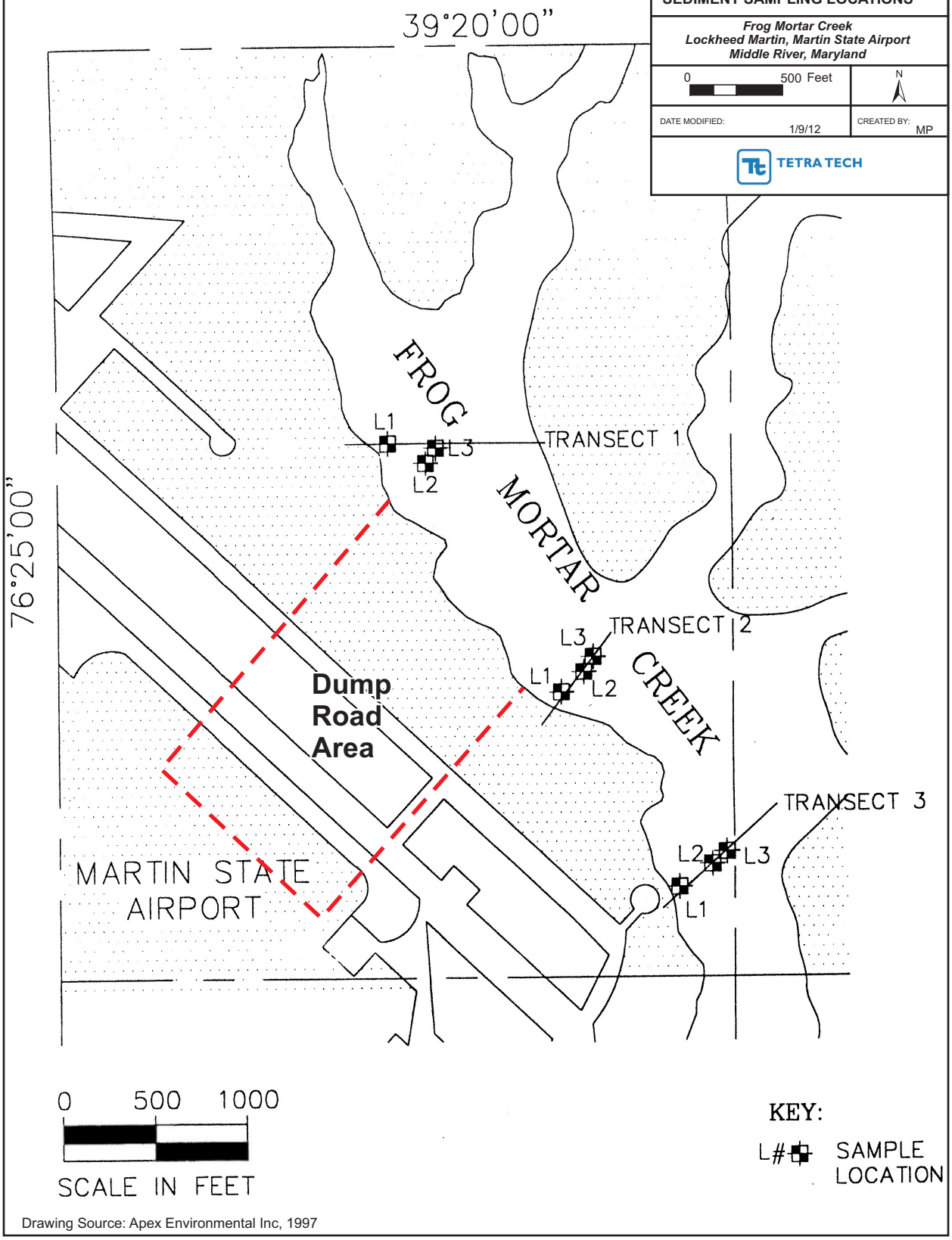

Drawing Source: Apex Environmental Inc, 1997

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Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\MSA 2004 Surface Water and Sediment Samples_revised 1 9 12.mxd)
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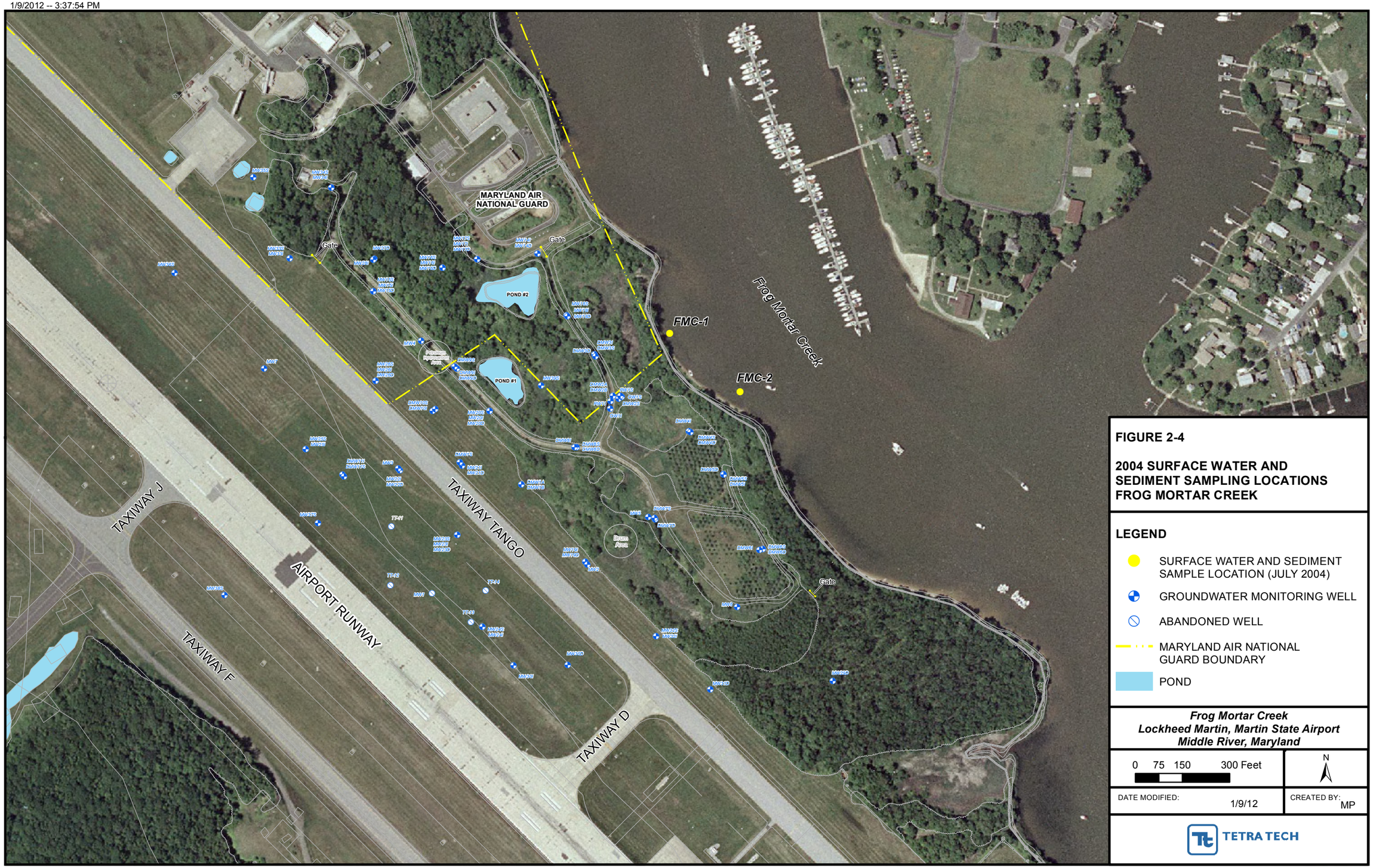

FIGURE 2-4

2004 SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS FROG MORTAR CREEK

LEGEND

- SURFACE WATER AND SEDIMENT SAMPLE LOCATION (JULY 2004)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/9/12

CREATED BY: MP

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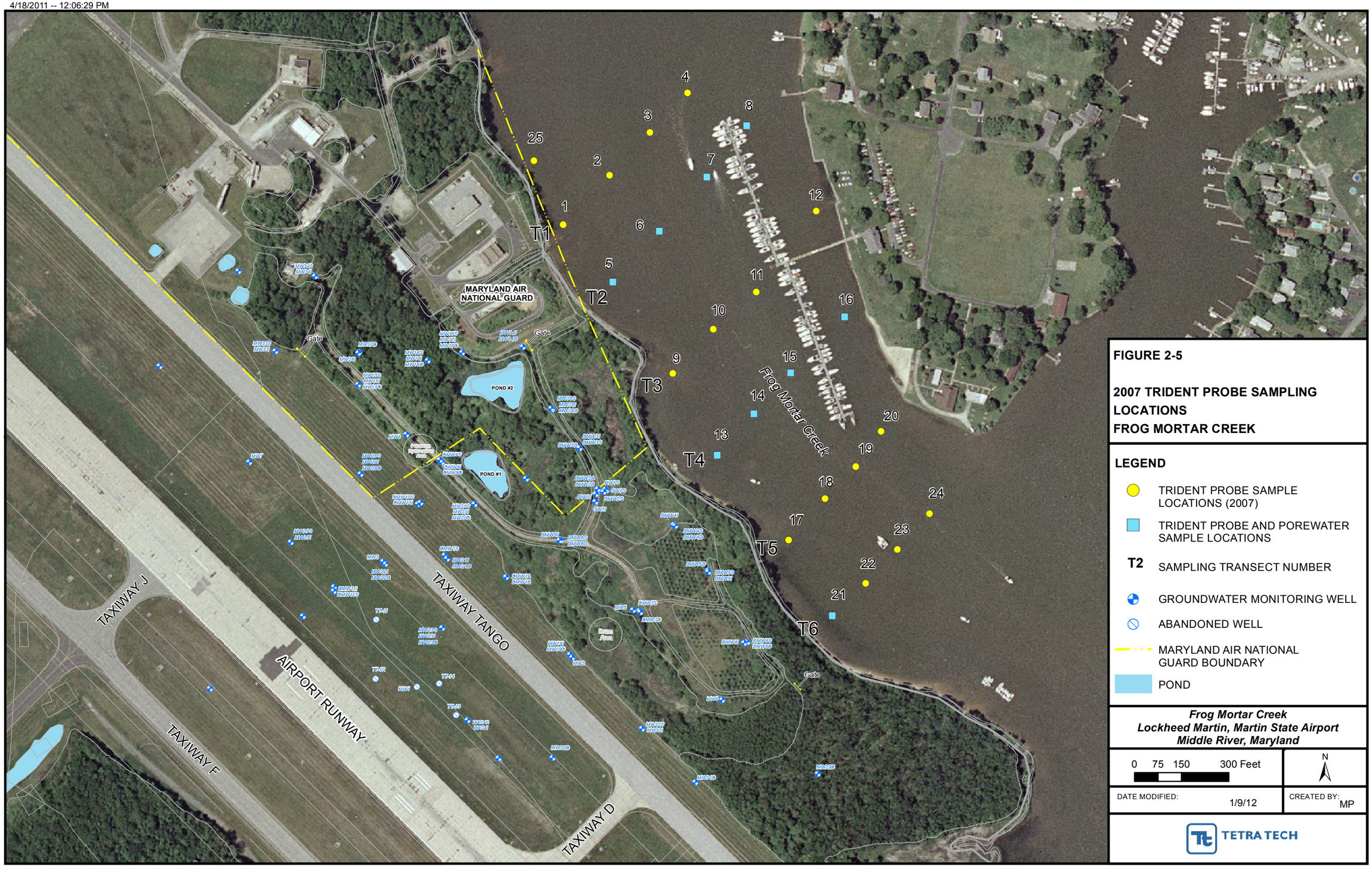

FIGURE 2-5

2007 TRIDENT PROBE SAMPLING LOCATIONS
FROG MORTAR CREEK

LEGEND

- TRIDENT PROBE SAMPLE LOCATIONS (2007)
- TRIDENT PROBE AND POREWATER SAMPLE LOCATIONS
- T2 — SAMPLING TRANSECT NUMBER
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/9/12

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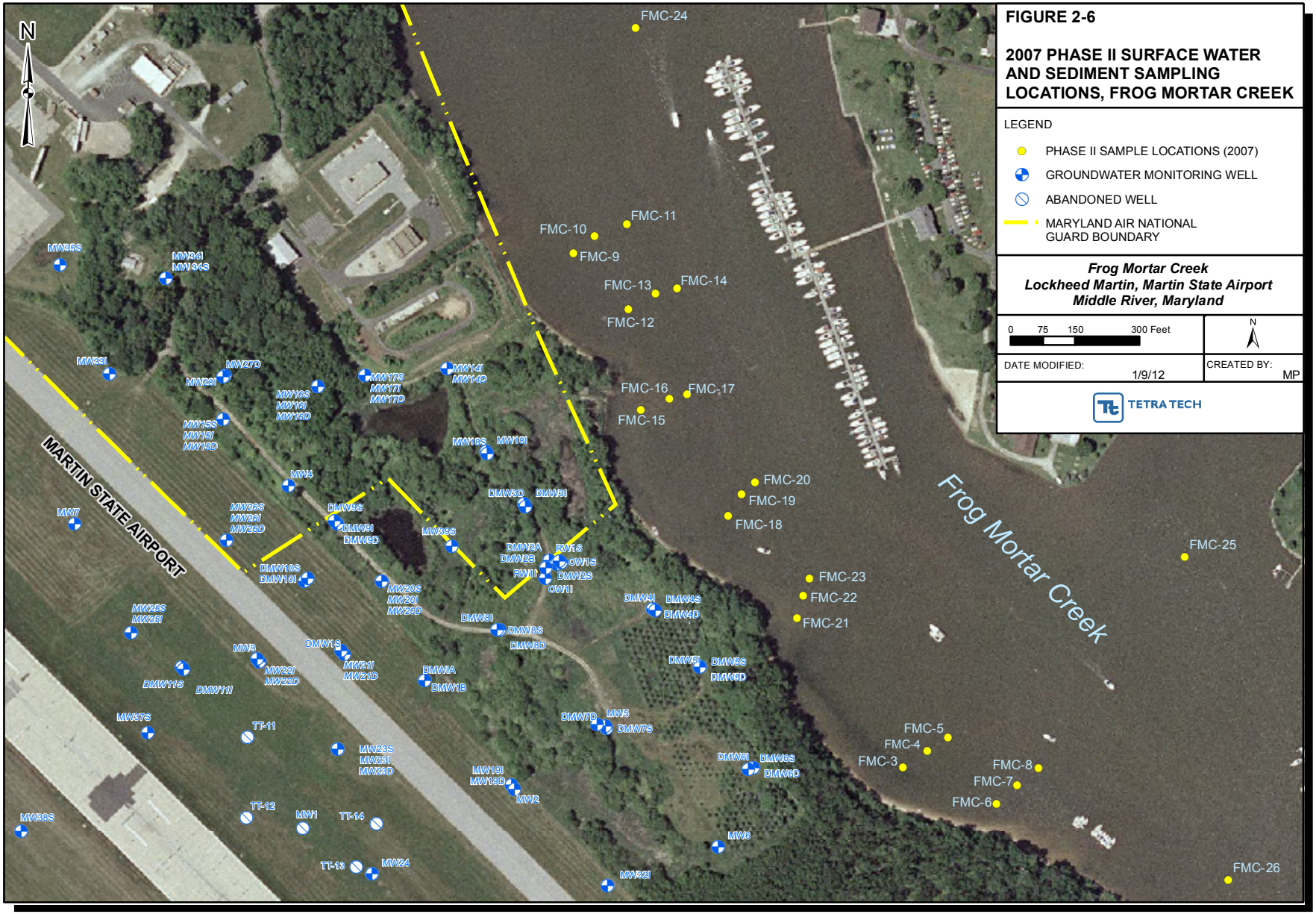

FIGURE 2-6

2007 PHASE II SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS, FROG MORTAR CREEK

LEGEND

- PHASE II SAMPLE LOCATIONS (2007)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/9/12

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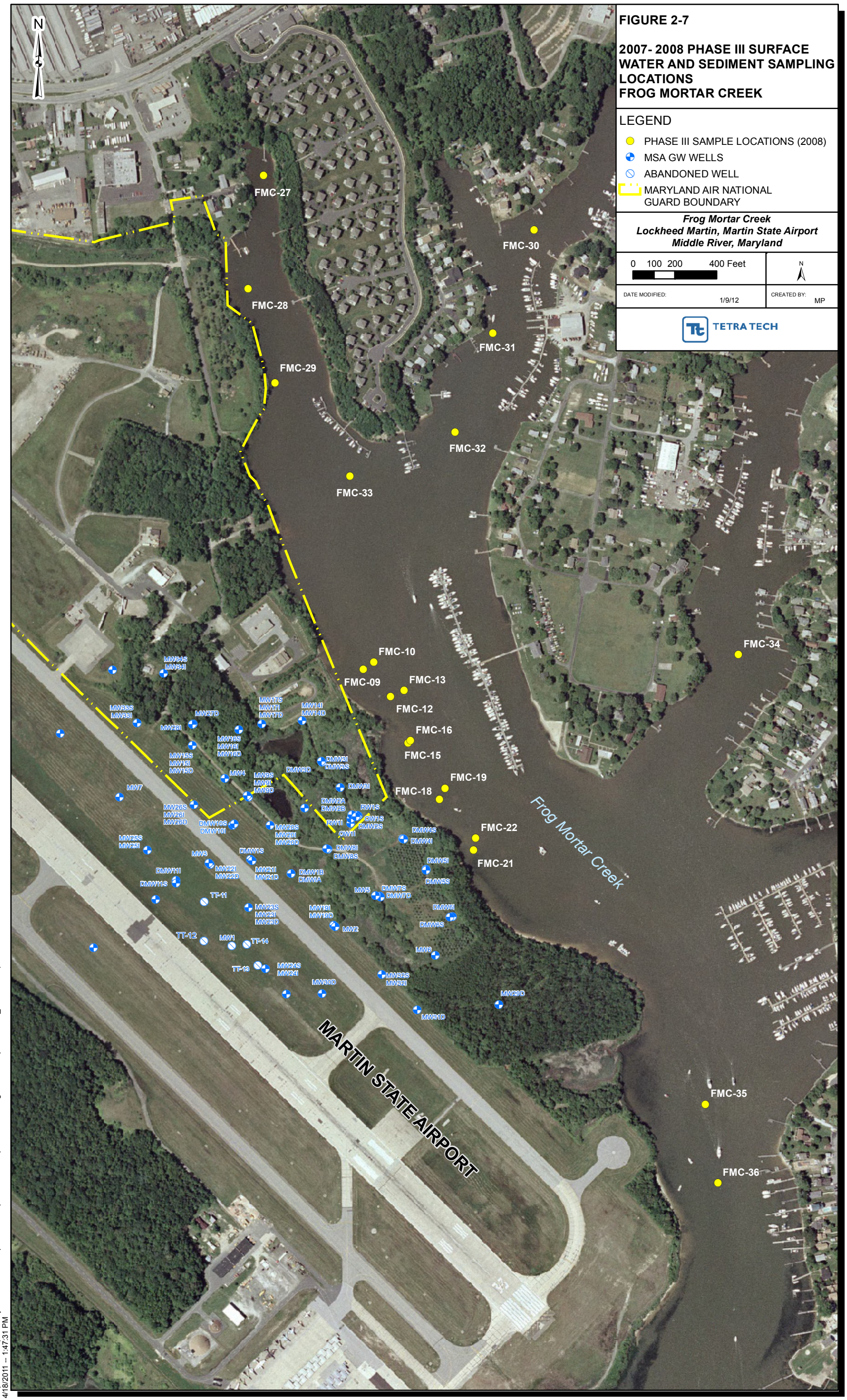

FIGURE 2-7

2007- 2008 PHASE III SURFACE WATER AND SEDIMENT SAMPLING LOCATIONS FROG MORTAR CREEK

LEGEND

- PHASE III SAMPLE LOCATIONS (2008)
- MSA GW WELLS
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 100 200 400 Feet

N

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FIGURE 2-8

JULY 2010 SURFACE WATER SAMPLING LOCATIONS

LEGEND

- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- SURFACE WATER SAMPLE LOCATION (2010)
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/9/12

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Section 3
Investigation Approach and Methodology

Site-related groundwater volatile organic compound (VOC) and several metals were detected in previous Frog Mortar Creek surface water samples at concentrations exceeding ecological and/or human health screening criteria. Additional Frog Mortar Creek surface water sampling was conducted in March 2011 to confirm the chemical results at five locations (samples MSA-SW37, MSA-SW38, MSA-SW39 MSA-SW40, and MSA-SW41) to assess the extent to which surface water in Frog Mortar Creek is affected by groundwater discharge near the shoreline. This technical memorandum presents the collection procedures and results of the March 2011 surface water samples from Frog Mortar Creek.

Before sampling, appropriate Tetra Tech, Inc. (Tetra Tech) personnel reviewed the site-specific health and safety plan (HASP) and respective safe work permits and emergency response plan included in the HASP. Tetra Tech conducted a mandatory health and safety tailgate meeting before beginning field activities. The Tetra Tech site health and safety officer documented personnel in attendance and pertinent safety and sampling procedures discussed. The HASP guided the surface water sampling work in Frog Mortar Creek.

3.1 SURFACE WATER SAMPLING

3.1.1 Surface Water Sampling and Analysis

Five Frog Mortar Creek locations (MSA-SW37, MSA-SW38, MSA-SW39, MSA-SW40 and MSA-SW41) were sampled for surface water on March 3, 2011 (see Figure 3-1). All five March 2011 surface water samples were collected near the Frog Mortar Creek shoreline from approximately one foot below the water surface. Surface water samples were collected as grab samples using a direct filling sampling technique, whereby a laboratory-cleaned, preservative-free sample container was filled by submerging the container to the target depth in the water column. The sample aliquot was then decanted into the appropriate sample containers, taking care to

minimize agitation of the sample. A peristaltic pump fitted with an inline 0.45-micron filter filtered a portion of the sample for analysis of dissolved metals. Reusable equipment was decontaminated between sampling locations, using the procedure described in Section 3.1.4. Surface water sampling locations were surveyed using a hand-held global positioning system (GPS) receiver. Sampling locations were surveyed in the Maryland State Plane North American Datum of 1983 and recorded in units of feet.

Samples from locations MSA-SW38, MSA-SW40, and MSA-SW41 were analyzed for VOCs by SW846 Method 8260B, for polycyclic aromatic hydrocarbons (PAHs) and 1,4-dioxane by SW846 Method 8270D, for priority pollutant metals (filtered and unfiltered) by SW846 Methods 6010C/7470A, for hexavalent chromium by SW846 Method 7199, and for perchlorate by U.S. Environmental Protection Agency (USEPA) Method 314. Samples from locations MSA-SW37 and MSA-SW39 were analyzed for priority pollutant metals (filtered and unfiltered) by SW846 Method 6010C/7470A and for hexavalent chromium by SW846 Method 7199 only, because prior analysis of samples from these locations did not show detectable concentrations of VOCs or 1,4-dioxane. Samples were analyzed by TestAmerica, Inc. in North Canton, Ohio. Analytical parameters for the samples are shown in Table 3-1.

No duplicates were collected during this investigation. One trip blank (one per cooler containing VOC samples) was submitted for VOC analysis for quality assurance/quality control purposes. Tide stage was recorded at the time of sampling and surface water quality parameters (including temperature, pH, specific conductance, turbidity, dissolved oxygen, and oxidation-reduction potential) were measured and recorded at each location using a portable water quality meter. All information was documented on surface water sample log sheets provided in Appendix A.

Additional surface water sampling in Frog Mortar Creek will be conducted in June 2011. The June 2011 sampling includes collecting surface water samples along several transects outward from the shoreline in the area of the Dump Road Area (DRA) site. A risk assessment will be conducted after receiving the results for the June 2011 surface water samples.

3.1.2 Documentation

A master site logbook was maintained as an overall record of field activities for the site. Sample documentation includes completed chain-of-custody (COC) forms and surface water-specific

sample log sheets. COC forms are standardized to summarize and document pertinent sample information such as sample identification and type, matrix, date and time of collection, preservation, and analysis requested. Sample custody procedures document sample acquisition and integrity. Surface water sample log-sheets are in Appendix A. COC are provided along with data-validation reports in Appendix B.

3.1.3 Sample Nomenclature and Handling

Surface water samples were identified with a unique sample identification tag. Surface water samples were labeled with an "MSA-SW" prefix followed by the sample number and six-digit sampling date. For example, a surface water sample collected on March 3, 2011 from MSA-SW37 was labeled as MSA-SW37-030311. The trip blank was labeled with a "TB" prefix followed by the sample's six-digit submittal date (e.g., TB-030311).

Sample handling includes field-related considerations concerning the selection of sample containers, preservatives, allowable holding times, and analyses requested. Proper custody procedures were followed throughout all phases of sample collection and handling. COC protocols were used throughout sample handling to assure the evidentiary integrity of sample containers. These protocols demonstrate that the samples were handled and transferred in a manner that would prevent or detect possible tampering. Sample containers were released under signature from the laboratory and were accepted under signature by the sampler(s) or individual responsible for maintaining custody until the sample containers are transferred to the sampler(s). Transport containers returning to the laboratory were sealed with strapping tape and a tamper-resistant custody seal. The custody seal contains the signature of the individual releasing the transport container, along with the date and time.

3.1.4 Equipment Decontamination

Both dedicated and disposable equipment were used for surface water sampling to eliminate decontamination activities. Therefore, this project required no equipment decontamination.

3.1.5 Waste Management

Investigation-derived waste (IDW) consisted of personal protective equipment (PPE) generated during field sampling. PPE IDW was brushed off, placed in trash bags, and disposed of in a facility trash receptacle designated by facility personnel.

3.2 DATA MANAGEMENT

Laboratory data-handling procedures met the requirements of the laboratory subcontract. All analytical and field data are maintained in project files, including copies of COC forms, sample log forms, sampling location maps, and documentation of quality assurance and data corrections.

3.2.1 Data Tracking and Control

A "cradle-to-grave" sample-tracking system was used from the beginning to the end of the sampling event. The field operations leader began and coordinated sample tracking before mobilizing to the field. Sample container labels were handwritten in the field and reviewed to assure that they were accurate and adhered to work plan requirements. The project manager (PM) coordinated with the analytical laboratory to ensure that the laboratory was aware of the number and type of samples and analyses that would be submitted that day.

During field sampling, the field operations leader forwarded the COC to the PM or designee and to the laboratory. The PM or designee confirmed that the COC provided the information required by the work plan. This allowed for early detection of errors made in the field so that adjustments could be made before sample analysis.

After successful completion of all requested analyses, the laboratory submitted an electronic deliverable for each sample delivery group. When all electronic deliverables were received from the laboratory, the PM or designee checked the laboratory submittal to determine whether the laboratory had performed all analyses requested. All requested analyses were performed for this project.

3.2.2 Sample Information

Data from field measurements were recorded using appropriate sample log sheets and summarized in tabular form, as were the raw instrument data from the laboratory. The field operations leader verified field data daily; laboratory data were verified by the group supervisor and then by the laboratory's quality control/documentation department.

3.2.3 Project Data Compilation

The analytical laboratory generated an Adobe® portable document format (PDF) file of the analytical data package, as well as an electronic-database deliverable. The electronic database was

checked against the PDF file provided by the laboratory and updated as required, based on data qualifier flags applied during data validation. All data, such as units of measure and chemical nomenclature, were corrected, as necessary, to be consistent with the project database.

3.2.4 Geographical Information System

Data management systems consist of a relational database and geographical information system (GIS) to manage environmental information pertaining to MSA. The relational database stores chemical, geological, hydrogeologic, and other environmental data collected during environmental investigations. The GIS is created from the relational database and contains subsets of the larger data pool. The GIS allows posting of environmental data on base maps, thereby representing the information graphically. Compiled sample, chemical, and positional data were incorporated into the GIS.

3.3 DATA REVIEW

Data from the laboratory were entered into a sample database and evaluated against risk-based criteria. Data validation (consisting of the evaluation of data completeness, holding times, calibrations, laboratory and field blank contamination, and detection limits) was completed concurrent with the data evaluation. These reviews are based on the *USEPA Region III Modifications to the National Functional Guidelines for Data Review* (USEPA, 1993 and 1994), and the specifics of the analytical methods used. Data from this sampling event consist of surface water sample chemical results. Data validation reports and COCs are provided as PDF files in Appendix B (on compact disc). Appendix C presents a table of all March 2011 Frog Mortar Creek surface water sample analytical data, including non-detects.

TABLE 3-1

CHEMICAL ANALYSES FOR FROG MORTAR CREEK SURFACE WATER SAMPLES - MARCH 2011
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

	Analytical Requirements					
Sample ID **Containter(s):** **Preservative:**	**VOCs (USEPA 8260B)** **3x40 ml glass vials** **HCl**	**PAHs and 1,4-Dioxane (USEPA 8270D SIM)** **2x1-Liter amber**	**Perchlorate (USEPA 314)** **250 ml plastic**	**Total PPM (USEPA 6010C/7470A)** **500 ml plastic** **HNO_3**	**Dissolved PPM (USEPA 6020B)** **500 ml plastic** **HNO_3**	**Hexavalent Chromium (USEPA 7199)** **250 ml plastic**
MSA-SW37				X	X	X
MSA-SW38	X	X	X	X	X	X
MSA-SW39				X	X	X
MSA-SW40	X	X	X	X	X	X
MSA-SW41	X	X	X	X	X	X

HCL - hydrochloric acid
HNO_3 - nitric acid
ml - milliliter
PAHs - polynuclear aromatic hydrocarbons
PPM - Priority Pollutant metals
USEPA - U.S. Environmental Protection Agency
VOCs - volatile organic compounds

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FIGURE 3-1

MARCH 2011 SURFACE WATER SAMPLING LOCATIONS

LEGEND

- MARCH 2011 SURFACE WATER SAMPLE LOCATION (1 FOOT DEPTH BELOW WATER SURFACE)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

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Section 4
Results

Five surface water samples were collected in shallow water near the western shoreline of Frog Mortar Creek near the Dump Road Area (DRA) site on March 3, 2011. MSA-SW38, MSA-SW40, and MSA-SW41 were collected directly northeast and downgradient of the DRA groundwater contaminant plume. MSA-SW37 and MSA-SW39 were collected along the Frog Mortar Creek shoreline north and south of the DRA in areas not expected to be substantially affected by chemicals in groundwater from the DRA site. Samples MSA-SW38, MSA-SW40, and MSA-SW41 were analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), 1,4-dioxane, and metals. Samples MSA-SW37 and MSA-SW39 were analyzed for metals only.

Validated surface water chemical data were used to generate a statistical summary table (Table 4-1) and a detection table (Table 4-2) summarizing the positive detections of chemical analytes in the March 2011 surface water samples. In Table 4-2, the sample results are screened against the U.S. Environmental Protection Agency (USEPA) Region III Biological Technical Advisory Group (BTAG) Freshwater Screening Benchmarks (USEPA, 2006), the USEPA National Recommended Water Quality Criteria (NRWQC) for acute and chronic aquatic organism exposures and for aquatic organism consumption (USEPA, 2009), and the State of Maryland Ambient Water Quality Criteria (AWQC) for acute and chronic aquatic organism exposures and for aquatic organism consumption (Code of Maryland Regulations, 2011). The NRWQCs, AWQCs and most BTAG screening levels for metals represent concentrations of dissolved metals in the water column; therefore, these criteria are used to screen against the dissolved metals results for Frog Mortar Creek. BTAG screening levels for arsenic, iron, mercury, selenium, and thallium are based on the total metal concentration in the water column. The total metal results for Frog Mortar Creek are used to screen against the BTAG criteria for these five metals. Gray shading in Table 4-2 indicates a result that exceeds only one surface water screening criterion. Black shading in Table 4-2 indicates a result that exceeds more than one surface water screening criterion. Figure 4-1 shows the screening criteria exceedances for the 2011 surface water samples.

Figures 4-2 through 4-4 show the concentrations of trichloroethene (TCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), and vinyl chloride (VC) for the Frog Mortar Creek samples. Appendix C presents the March 2011 analytical data, including non-detects.

As shown in Table 4-2 and Figures 4-1 through 4-4, several VOCs found in groundwater at the DRA site (e.g., TCE, *cis*-1,2-DCE, and VC) were detected in March 2011 surface water samples at locations MSA-SW38, MSA-SW40, and MSA-SW41. For those three samples, concentrations of VOCs, 1,4-dioxane, and metals (e.g., dissolved cadmium, dissolved manganese, total iron) were greatest at MSA-SW38, which is located northeast and hydraulically downgradient of DRA monitoring wells that contain some of the highest concentrations of site-related constituents in shallow and intermediate depth groundwater (e.g., wells DMW2S/A/B and DMW3S/I/D).

In the March 2011 samples, TCE was detected at MSA-SW38, MSA-SW40, and MSA-SW41 (Figures 4-1 and 4-2). As shown in Figure 4-1, concentrations of TCE at locations MSA-SW38 (32 micrograms per liter [µg/L]) and MSA-SW41 (24 µg/L), located in the central portion of the DRA, exceeded the BTAG ecological screening level of 21 µg/L. The VC concentration in sample MSA-SW38 (140 µg/L) exceeded the human health NRWQC/AWQC for the consumption of organisms screening level of 24 µg/L. In addition, concentrations of M+P xylenes at 14 µg/L and total xylenes at 16 µg/L exceeded the BTAG screening level of 13 µg/L, also in sample MSA-SW38.

Metals exceeding a screening criterion in one or more of the 2011 samples include dissolved arsenic, dissolved barium, dissolved cadmium, dissolved manganese, and total iron. The dissolved arsenic concentrations for the samples, ranging from 2.6-3.0 µg/L are similar at all five locations and are similar to the dissolved arsenic concentrations of 2.2 to 3.9 micrograms per liter reported for reference samples (i.e., background locations) collected as part of Lockheed Martin Corporation's (Lockheed Martin's) 2007-2008 Frog Mortar Creek investigation (Tetra Tech, 2009). The total arsenic concentrations, ranging from 2.1-3.7 µg/L, are also similar to this 2007-2008 reference sample range.

PAHs, perchlorate, and hexavalent chromium were not detected in the March 2011 surface water samples.

TABLE 4-1

STATISTICAL SUMMARY OF FROG MORTAR CREEK SURFACE WATER SAMPLES - MARCH 2011
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 1 OF 2

Chemical	Frequency of Detection[1]		Mininum Non Detected	Maximum Non Detected	Mininum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	Mean of Positive Detects	Standard Deviation
	Number	Percent								
VOLATILES (µg/l)										
CIS-1,2-DICHLOROETHENE	3/3	100%	-	-	5.5	130	MSA-SW38-030311	52.2	52.2	NA[2]
TRICHLOROETHENE	3/3	100%	-	-	4.2	32	MSA-SW38-030311	20.1	20.1	NA[2]
VINYL CHLORIDE	3/3	100%	-	-	1.8	140	MSA-SW38-030311	50.2	50.2	NA[2]
1,1-DICHLOROETHENE	2/3	67%	0.19	0.19	0.21 J	1.4 J	MSA-SW38-030311	0.568	0.805	NA[2]
1,4-DICHLOROBENZENE	2/3	67%	0.13	0.13	0.38 J	3.9 J	MSA-SW38-030311	1.45	2.14	NA[2]
ETHYLBENZENE	2/3	67%	0.17	0.17	0.23 J	1.9 J	MSA-SW38-030311	0.738	1.07	NA[2]
M+P-XYLENES	2/3	67%	0.24	0.24	1.6 J	14	MSA-SW38-030311	5.24	7.80	NA[2]
O-XYLENE	2/3	67%	0.14	0.14	0.29 J	2.8 J	MSA-SW38-030311	1.05	1.55	NA[2]
TOTAL XYLENES	2/3	67%	0.28	0.28	1.9 J	16	MSA-SW38-030311	6.01	8.95	NA[2]
TRANS-1,2-DICHLOROETHENE	2/3	67%	0.19	0.19	0.2 J	0.87 J	MSA-SW38-030311	0.388	0.535	NA[2]
1,2,4-TRICHLOROBENZENE	1/3	33%	0.15	0.15	1.2 J	1.2 J	MSA-SW38-030311	0.450	1.20	NA[2]
TOLUENE	1/3	33%	0.13	0.13	1.4 J	1.4 J	MSA-SW38-030311	0.510	1.40	NA[2]
SEMIVOLATILES (µg/l)										
1,4-DIOXANE	2/3	67%	0.49	0.49	0.49 J	2.6	MSA-SW38-030311	1.11	1.55	NA[2]
FILTERED METALS (µg/l)										
ARSENIC	5/5	100%	-	-	2.6 J	3 J	MSA-SW40-030311	2.72	2.72	0.164
COBALT	5/5	100%	-	-	0.98 J	3.6 J	MSA-SW38-030311	1.96	1.96	1.02
MANGANESE	5/5	100%	-	-	67.4	253	MSA-SW38-030311	141	141	70.9
MOLYBDENUM	5/5	100%	-	-	1 J	1.6 J	MSA-SW37-030311, MSA-SW41-030311	1.34	1.34	0.261
NICKEL	5/5	100%	-	-	2.3 J	3.4 J	MSA-SW41-030311	2.74	2.74	0.428
BARIUM	2/5	40%	15.6	18.2	22.2	30	MSA-SW37-030311	15.6	26.1	9.98
CADMIUM	1/5	20%	0.65	0.65	0.86 J	0.86 J	MSA-SW38-030311	0.432	0.860	0.239

TABLE 4-1

STATISTICAL SUMMARY OF FROG MORTAR CREEK SURFACE WATER SAMPLES - MARCH 2011
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 2 OF 2

Chemical	Frequency of Detection[1]		Mininum Non Detected	Maximum Non Detected	Mininum Detected	Maximum Detected	Sample of Maximum Detected	Mean of All Samples	Mean of Positive Detects	Standard Deviation
	Number	Percent								
TOTAL METALS (µg/l)										
ARSENIC	5/5	100%	-	-	2.1 J	3.7 J	MSA-SW40-030311	3.22	3.22	0.646
BARIUM	5/5	100%	-	-	49.3	58.4	MSA-SW37-030311	53.5	53.5	3.28
COBALT	5/5	100%	-	-	1.9 J	5.4	MSA-SW38-030311	2.74	2.74	1.49
IRON	5/5	100%	-	-	570	2760	MSA-SW38-030311	1433	1433	886
LEAD	5/5	100%	-	-	1.5 J	6.3	MSA-SW38-030311	3.86	3.86	2.18
MANGANESE	5/5	100%	-	-	112	311	MSA-SW38-030311	166	166	81.8
MOLYBDENUM	5/5	100%	-	-	1.2 J	1.3 J	MSA-SW37-030311, MSA-SW38-030311, MSA-SW41-030311	1.26	1.26	0.055
NICKEL	5/5	100%	-	-	2.6 J	5 J	MSA-SW38-030311	3.50	3.50	0.900
CHROMIUM	3/5	60%	3.6	3.6	4.5 J	7.1 J	MSA-SW38-030311	3.94	5.37	2.22
COPPER	3/5	60%	7	7.6	16	19.5	MSA-SW38-030311	12.2	17.9	7.89
VANADIUM	3/5	60%	2.2	2.2	2.9 J	5.2 J	MSA-SW38-030311	2.76	3.87	1.73
CADMIUM	1/5	20%	0.65	0.65	1.2 J	1.2 J	MSA-SW38-030311	0.500	1.20	0.391

All concentrations are in micrograms per liter (µg/L)

1 Analytes are ranked from highest to lowest by percent frequency of detection.

2 Not applicable; there are an insufficient number of samples to calculate this statistic.

- = Not applicable; analyte was detected in all (100%) samples.

J = estimated value

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

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

Associated Samples
MSA-SW37-030311
MSA-SW38-030311
MSA-SW39-030311
MSA-SW40-030311
MSA-SW41-030311

TABLE 4-2

CHEMICAL RESULTS AND SCREENING LEVELS FOR FROG MORTAR CREEK SURFACE WATER SAMPLES - MARCH 2011
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	Recommended and Ambient Water Quality Criteria[1]			BTAG[2]	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:			Human Health	Surface Water	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
SAMPLE DATE:	Freshwater		Consumption of	Screening	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
LOCATION:	Acute	Chronic	Organism Only	Benchmarks	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
VOLATILES (ug/l)									
1,1-DICHLOROETHENE	NA	NA	7,100	25	NA	1.4 J	NA	--	0.21 J
1,2,4-TRICHLOROBENZENE	NA	NA	70	24	NA	1.2 J	NA	--	--
1,3-DICHLOROBENZENE	NA	NA	960	150	NA		NA	--	--
1,4-DICHLOROBENZENE	NA	NA	190	26	NA	3.9 J	NA	--	0.38 J
ACETONE	NA	NA	NA	1500	NA	--	NA	--	5.7 B
CIS-1,2-DICHLOROETHENE	NA	NA	NA	590 [5]	NA	130	NA	5.5	21
ETHYLBENZENE	NA	NA	2,100	90	NA	1.9 J	NA	--	0.23 J
M+P-XYLENES	NA	NA	NA	13	NA	14	NA	--	1.6 J
O-XYLENE	NA	NA	NA	13	NA	2.8 J	NA	--	0.29 J
TOLUENE	NA	NA	15,000	2	NA	1.4 J	NA	--	--
TOTAL XYLENES	NA	NA	NA	13	NA	16	NA	--	1.9 J
TRANS-1,2-DICHLOROETHENE	NA	NA	10,000	970	NA	0.87 J	NA	--	0.2 J
TRICHLOROETHENE	NA	NA	300[3]	21	NA	32	NA	4.2	24
VINYL CHLORIDE	NA	NA	24[3]	930	NA	140	NA	1.8	8.7
SEMIVOLATILE ORGANIC COMPOUNDS (ug/l)									
1,4-DIOXANE	NA	NA	NA	NA	NA	2.6	NA	0.49 J	--
FILTERED METALS (ug/l)									
ANTIMONY	NA	NA	640	30	--	--	--	--	--
ARSENIC	340	150	1.4[3]	*[5]	2.6 J	2.7 J	2.6 J	3 J	2.7 J
BARIUM	NA	NA	NA	4	30	22.2	17.9 B	15.6 B	18.2 B
CADMIUM	2	0.25	NA	0.25	--	**0.86 J**	--	--	--
CHROMIUM	570	74	NA	74	--	--	--	4.5 J	--
COBALT	NA	NA	NA	23	1.4 J	3.6 J	1.6 J	0.98 J	2.2 J
COPPER	13	9	NA	9	6.8 B	4.1 B	3.5 B	5.8 B	4.3 B

TABLE 4-2

CHEMICAL RESULTS AND SCREENING LEVELS FOR FROG MORTAR CREEK SURFACE WATER SAMPLES - MARCH 2011
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	Recommended and Ambient Water Quality Criteria[1]			BTAG[2]	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	Freshwater		Human Health	Surface Water	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
SAMPLE DATE:			Consumption of	Screening	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
LOCATION:	Acute	Chronic	Organism Only	Benchmarks	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
LEAD	65	2.5	NA	2.5	--	--	--	--	--
MANGANESE	NA	NA	100	120	109	**253**	114	67.4	**161**
MOLYBDENUM	NA	NA	NA	73	1.6 J	1.3 J	1.2 J	1 J	1.6 J
NICKEL	470	52	4,600	52	2.6 J	2.9 J	2.5 J	2.3 J	3.4 J
VANADIUM	NA	NA	NA	20	--	--	--	--	--
ZINC	120	120	26,000	120	18.1 B	20.1 B	14.8 B	24 B	21.2 B
TOTAL METALS (ug/l)									
ANTIMONY					--	--	--	--	--
ARSENIC				5[5]	2.1 J	3.6 J	3.3 J	3.7 J	3.4 J
BARIUM					58.4	54	49.3	52.5	53.3
CADMIUM					--	1.2 J	--	--	--
CHROMIUM					4.5 J	7.1 J	--	4.5 J	--
COBALT					2 J	5.4	2.2 J	1.9 J	2.2 J
COPPER					16	19.5	7.6 B	18.1	7 B
IRON				300[5]	1670	2760	570	1490	675
LEAD					5.5	6.3	1.5 J	4.3 J	1.7 J
MANGANESE					112	311	131	139	136
MOLYBDENUM					1.3 J	1.3 J	1.2 J	1.2 J	1.3 J
NICKEL					3.2 J	5 J	3.5 J	3.2 J	2.6 J
VANADIUM					2.9 J	5.2 J	--	3.5 J	--
ZINC					41.2 B	51.4 B	24.1 B	33.4 B	29.9 B
MISCELLANEOUS (ug/l)									
HEXAVALENT CHROMIUM	16	11	NA	11	--	--	--	--	--

TABLE 4-2

CHEMICAL RESULTS AND SCREENING LEVELS FOR FROG MORTAR CREEK SURFACE WATER SAMPLES - MARCH 2011
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

1 National Recommended Water Quality Criteria, http://water.epa.gov/scitech/swguidance/standards/current/index.cfm; and Maryland Numerical Criteria for Toxic Substances in Surface Waters, Code of Maryland Regulations (COMAR) 26.08.02.03, http://www.dsd.state.md.us.comarhtml/26/26.08.02.03-2.htm

2 U.S.Environmental Protection Agency (USEPA) Region 3 Biological Technical Advisory Group (BTAG) Freshwater Screening Levels (USEPA, 2006).
The screening levels for the following metals were based on a hardness value of 100 milligrams per liter: cadmium, copper, lead, nickel, silver, and zinc.

3 For carcinogens, criterion is for incremental cancer risk of $1x10^{-5}$.

4 The BTAG screening benchmark for 1,2-dichloroethene (590 µg/L) is used as a surrogate screenng level for cis-1,2-dichloroethene.

5 This BTAG screening benchmark is for the total metal concentration. Therefore, only the total metal concentrations are screened against the BTAG screening benchmark for this metal.

Gray shading indicates the value exceeds one of the criteria.

Black highlighted cell indicates the concentration exceeds more than one criterion.

-- - Not detected at the method detection limit.

B - Result is attributed to laboratory blank contamination per USEPA validation rules.

J - Positive result is considered estimated.

µg/L - micrograms per liter.

NA = Not analyzed or no criterion developed for this analyte.

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MSA- SW37	
Analyte (ug/L)	3/3/2011
Arsenic- Filtered	2.6 J
Barium- Filtered	30
Iron	1670
Manganese- Filtered	109

MSA- SW40	
Analyte (ug/L)	3/3/2011
Arsenic- Filtered	3 J
Iron	1490

MSA- SW38	
Analyte (ug/L)	3/3/2011
M + P Xylenes	14
Total Xylenes	16
Trichloroethene	32
Vinyl Chloride	140
Arsenic- Filtered	2.7 J
Barium- Filtered	22.2
Cadmium- Filtered	0.86 J
Iron	2760
Manganese- Filtered	253

MSA- SW41	
Analyte (ug/L)	3/3/2011
Trichloroethene	24
Arsenic- Filtered	2.7 J
Iron	675
Manganese- Filtered	161

MSA- SW39	
Analyte (ug/L)	3/3/2011
Arsenic- Filtered	2.6 J
Iron	570
Manganese- Filtered	114

SCREENING CRITERIA				
	Ambient Water Quality Criteria[1]		Ecological Surface Water Screening Level[2]	Human Health Consumption of Organism Only[1]
	Freshwater			
Analyte	Acute	Chronic		
VOLATILES (ug/l)				
M+P-XYLENES	NA	NA	1.8	NA
TOTAL XYLENES	NA	NA	13	NA
TRICHLOROETHENE	NA	NA	21	300[3]
VINYL CHLORIDE	NA	NA	930	24[3]
METALS (ug/l)				
ARSENIC	340	150	5[4]	1.4[3]
BARIUM	NA	NA	4	NA
CADMIUM	2	0.25	0.25	NA
IRON	NA	1000	300[4]	NA
MANGANESE	NA	NA	120	100

1 National Recommended Water Quality Criteria and Maryland Numerical Criteria for Toxic Substances in Surface Waters

2 USEPA Region 3 Biological Technical Advisory Group Freshwater Screening Levels

3 For carcinogens, criterion is for incremental cancer risk of 1×10^{-5}.

4 Screening value is for total metals only.

MARYLAND AIR NATIONAL GUARD

Frog Mortar Creek

TAXIWAY TANGO

AIRPORT RUNWAY

TAXIWAY D

POND #1

POND #2

Gate

Gate

Gate

Berm Area

FIGURE 4-1

ANALYTES EXCEEDING SCREENING LEVELS FOR SURFACE WATER SAMPLES FROG MORTAR CREEK, MARCH 2011

LEGEND

- SURFACE WATER SAMPLE LOCATION (2011)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

ug/L = Micrograms per liter
J = Estimated value

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/26/12

CREATED BY: MP

TETRA TECH

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FIGURE 4-2

CONCENTRATIONS OF TRICHLOROETHENE IN SURFACE WATER SAMPLES, MARCH 2011

LEGEND

- MARCH 2011 SURFACE WATER SAMPLE LOCATION (1 FOOT DEPTH BELOW WATER SURFACE)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

(1.7) = TRICHLOROETHENE CONCENTRATION
J = ESTIMATED VALUE
- - = NOT DETECTED
NA = NOT ANALYZED

Concentration in micrograms per liter (ug/L)

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/11/12

CREATED BY: MP

TETRA TECH

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FIGURE 4-3

CONCENTRATIONS OF CIS-1,2-DICHLOROETHENE IN SURFACE WATER SAMPLES, MARCH 2011

LEGEND

- MARCH 2011 SURFACE WATER SAMPLE LOCATION (1 FOOT DEPTH BELOW WATER SURFACE)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

(1.7) = CIS-1,2-DICHLOROETHENE CONCENTRATION
J = ESTIMATED VALUE
- - = NOT DETECTED
NA = NOT ANALYZED

Concentration in micrograms per liter (ug/L)

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/5/12

CREATED BY: MP

TETRA TECH

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FIGURE 4-4

CONCENTRATIONS OF VINYL CHLORIDE IN SURFACE WATER SAMPLES, MARCH 2011

LEGEND

- MARCH 2011 SURFACE WATER SAMPLE LOCATION (1 FOOT DEPTH BELOW WATER SURFACE)
- GROUNDWATER MONITORING WELL
- ABANDONED WELL
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

(1.7) = VINYL CHLORIDE CONCENTRATION
J = ESTIMATED VALUE
- - = NOT DETECTED
NA = NOT ANALYZED

Concentration in micrograms per liter (ug/L)

Frog Mortar Creek
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 75 150 300 Feet

N

DATE MODIFIED: 1/11/12

CREATED BY: MP

TETRA TECH

Section 5
Summary

The following summarizes Lockheed Martin Corporation's (Lockheed Martin's) Frog Mortar Creek surface water investigation and findings:

- Five surface water samples were collected from Frog Mortar Creek on March 3, 2011 and chemically analyzed to assess impacts to Frog Mortar Creek by constituents found in groundwater at the Dump Road Area (DRA) site.

- The March 2011 surface water samples were collected near the Frog Mortar Creek shoreline from approximately one-foot below the water surface using the direct-filling sampling technique. Samples from three locations were analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), 1,4-dioxane, filtered and unfiltered metals, hexavalent chromium, and perchlorate. Samples from two locations were analyzed for filtered and unfiltered metals and hexavalent chromium only.

- The data were validated in accordance with the *U.S. Environmental Protection Agency (USEPA) Region III Modifications to the National Functional Guidelines for Data Review* and the specifics of the analytical methods used.

- Sampling results were screened against the U.S. Environmental Protection Agency Region III Biological Technical Advisory Group (BTAG) ecological freshwater screening benchmarks, the U.S. Environmental Protection Agency National Recommended Water Quality Criteria (NRWQC) for acute and chronic aquatic organism exposures and for human health aquatic organism consumption, and the State of Maryland Ambient Water Quality Criteria (AWQC) for acute and chronic aquatic organism exposures and for human health aquatic organism consumption. Volatile organic compounds (primarily trichloroethene [TCE], *cis*-1,2-dichloroethene [*cis*-1,2-DCE] and vinyl chloride [VC]), 1,4-dioxane, and metals were detected in the March 2011 surface water samples.

- Polycyclic aromatic hydrocarbons, perchlorate, and hexavalent chromium were not detected in the 2011 surface water samples.

- Concentrations of volatile organic compounds, 1,4-dioxane, and several metals are greatest for sampling location MSA-SW38, northeast and hydraulically downgradient of Dump Road Area monitoring wells that contain some of the highest concentrations of site-related constituents in groundwater (e.g., wells DMW2S/A/B and DMW3S/I/D).

- Vinyl chloride, at a concentration of 140 micrograms per liter (µg/L) at sampling location MSA-SW38, exceeded the human health consumption of organism screening criterion of 24 micrograms per liter. Concentrations of trichloroethene, ranging from 24 micrograms

per liter in sample MSA-SW41 to 32 micrograms per liter at MSA-SW38 and xylenes at sample MSA-38A exceeded Biological Technical Advisory Group ecological screening benchmarks of 21 and 13 micrograms per liter for trichloroethene and xylenes, respectively.

- Metals exceeding the screening criteria in the March 2011 Frog Mortar Creek samples include dissolved arsenic (five locations), dissolved barium (two locations), dissolved cadmium (one location), dissolved manganese (four locations), and total iron (five locations). However, concentrations of dissolved arsenic, as well as total arsenic, are similar in all samples and are similar to the arsenic concentrations reported for reference samples (i.e., background locations) collected as part of a 2007-2008 Frog Mortar Creek investigation.

- Additional surface water sampling in Frog Mortar Creek will be conducted in June 2011. The June 2011 sampling includes collecting surface water samples along several transects outward from the shoreline in the area of the Dump Road Area site.

Section 6
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APPENDIX A—SURFACE WATER SAMPLE LOG SHEETS

Tetra Tech NUS, Inc.

SURFACE-WATER SAMPLE LOG SHEET

Project Site Name: MSA Dump Road
Project No.: 112IC03292

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

Sample ID No.: MSA-SW37-030311
Sample Location: FMC SW37
Sampled By: SBC / WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/3/2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1230	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: GRAB	Slightly brn	4.96	7.53	8.23	14.6	11.72	0.4	124

PURGE DATA:

Date: 3/3/2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: GRAB								
Monitor Reading (ppm): NA								
Well Casing Diameter & Material Type: NA								
Water Depth (WD): 1'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): NA								
Start Purge (hrs): NA								
End Purge (hrs): NA								
Total Purge Time (min): NA								
Total Vol. Purged (gal/L): NA								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total PPM	HNO_3	1-500 ml plastic bottle	✓
Dissolved PPM	HNO_3	1-500 ml plastic bottle	✓
Hexavalent Chromium	4°C	1-250 ml plastic bottle	✓

OBSERVATIONS / NOTES:

39.328181 N
76.408769 W

Parameter time/Date: 1002/3-7-11

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SURFACE-WATER SAMPLE LOG SHEET

Project Site Name: MSA Dump Road
Project No.: 112IC03292

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

Sample ID No.: MSA-SW38-03034
Sample Location: FMC SW38
Sampled By: SBC / WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/3/2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1300	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: GRAB	Slightly brn	5.47	7.64	8.76	15.7	11.62	0.4	122

PURGE DATA:

Date: 3/3/2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: GRAB								
Monitor Reading (ppm): NA								
Well Casing Diameter & Material								
Type: NA								
Water Depth (WD): 1'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): NA								
Start Purge (hrs): NA								
End Purge (hrs): NA								
Total Purge Time (min): NA								
Total Vol. Purged (gal/L): NA								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 ml glass vials	✓
PAHs and 1,4-Dioxane	4°C	2-1 Liter ambers	✓
Perchlorate	4°C	1-250 ml plastic bottle	✓
Total PPM	HNO_3	1-500 ml plastic bottle	✓
Dissolved PPM	HNO_3	1-500 ml plastic bottle	✓
Hexavalent Chromium	4°C	1-250 ml plastic bottle	✓

OBSERVATIONS / NOTES:

39.336088 N
76.407699 W

Parameter date/time: 3/7/11 - 1027

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): [signature]

Tetra Tech NUS, Inc.

SURFACE-WATER SAMPLE LOG SHEET

Project Site Name: MSA Dump Road
Project No.: 112IC03292

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

Sample ID No.: MSA-SW39-030311
Sample Location: FMC SW39
Sampled By: SBC / WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/3/2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1350	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: GRAB	slightly brn	5.42	7.66	8.24	17.2	11.59	0.4	112

PURGE DATA:

Date: 3/3/2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: GRAB								
Monitor Reading (ppm): NA								
Well Casing Diameter & Material Type: NA								
Water Depth (WD): 1'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): NA								
Start Purge (hrs): NA								
End Purge (hrs): NA								
Total Purge Time (min): NA								
Total Vol. Purged (gal/L): NA								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total PPM	HNO_3	1-500 ml plastic bottle	✓
Dissolved PPM	HNO_3	1-500 ml plastic bottle	✓
Hexavalent Chromium	4°C	1-250 ml plastic bottle	✓

OBSERVATIONS / NOTES:

Hex Chrom to Edison

Same location as previous sampling event.

Parameter Time/Date: 1107/3-7-11

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SURFACE-WATER SAMPLE LOG SHEET

Project Site Name: MSA Dump Road
Project No.: 112IC03292

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

Sample ID No.: MSA-SW40-030311
Sample Location: FMC SW40
Sampled By: SBC / WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/3/2011	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1248	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: GRAB	dk yel brn	4.91	7.85	9.57	40.0	11.84	0.4	172

PURGE DATA:

Date: 3/3/2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: GRAB								
Monitor Reading (ppm): NA								
Well Casing Diameter & Material Type: NA								
Water Depth (WD): 1'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): NA								
Start Purge (hrs): NA								
End Purge (hrs): NA								
Total Purge Time (min): NA								
Total Vol. Purged (gal/L): NA								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 ml glass vials	✓
PAHs and 1,4-Dioxane	4°C	2-1 Liter ambers	✓
Perchlorate	4°C	1-250 ml plastic bottle	✓
Total PPM	HNO_3	1-500 ml plastic bottle	✓
Dissolved PPM	HNO_3	1-500 ml plastic bottle	✓
Hexavalent Chromium	4°C	1-250 ml plastic bottle	✓

OBSERVATIONS / NOTES:

39.326 846 N
76.407763 W

Parameter Time/Date: 1017 / 3-7-11

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SURFACE-WATER SAMPLE LOG SHEET

Project Site Name: MSA Dump Road
Project No.: 112IC03292

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

Sample ID No.: MSA-SW41-030311
Sample Location: FMC SW41
Sampled By: SBC / WP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 3/3/2011	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1317								
Method: GRAB		5.81	7.77	7.24	16.5	11.65	0.4	98

PURGE DATA:

Date: 3/3/2011	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: GRAB								
Monitor Reading (ppm): NA								
Well Casing Diameter & Material Type: NA								
Water Depth (WD): 1'								
Static Water Level (WL): NA								
One Casing Volume(gal/L): NA								
Start Purge (hrs): NA								
End Purge (hrs): NA								
Total Purge Time (min): NA								
Total Vol. Purged (gal/L): NA								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 ml glass vials	✓
PAHs and 1,4-Dioxane	4°C	2-1 Liter ambers	✓
Perchlorate	4°C	1-250 ml plastic bottle	✓
Total PPM	HNO_3	1-500 ml plastic bottle	✓
Dissolved PPM	HNO_3	1-500 ml plastic bottle	✓
Hexavalent Chromium	4°C	1-250 ml plastic bottle	✓

OBSERVATIONS / NOTES:

39.525842 N
76.406338 W

Parameter time/Date: 1040/3-7-11

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

APPENDIX B—DATA-VALIDATION REPORTS (ON CD)

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO: D. MURALI **DATE:** April 4, 2011

FROM: MEGAN CARSON **COPIES:** DV FILE

SUBJECT: INORGANIC DATA VALIDATION-TAL TOTAL AND DISSOLVED METALS, PERCHLORATE, AND HEXAVALENT CHROMIUM
FROG MORTAR CREEK
SDG A1C040534

SAMPLES: 5/Water/
MSA-SW37-030311 MSA-SW38-030311
MSA-SW39-030311 MSA-SW40-030311
MSA-SW41-030311

Overview

The sample set for Frog Mortar Creek, SDG A1C040534, consists of five (5) aqueous environmental samples. This SDG contained no field duplicate pairs

All samples were analyzed for TAL metals. The samples were collected by Tetra Tech NUS on March 3rd, 2011 and analyzed by Test America. Metals analyses were conducted using EPA SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A. Perchlorate analyses were conducted by EPA method 314.0. Hexavalent chromium analyses were conducted by SW-846method 7199.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, ICP serial dilution, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems – None.

Minor Problems-

- The following contaminants were detected in preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Barium	0.88 ug/L	4.4 ug/L
Copper	0.44 ug/L	2.2 ug/L
Thallium	0.20 ug/L	1.0 ug/L
Zinc	8.1 ug/L	40.5 ug/L

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into

consideration when evaluating for blank contamination. Positive results less than the blank action level reported for silver and cadmium were qualified "B" as a result of laboratory blank contamination.

- The CRDL standard had a percent recovery >110% for iron and <90% antimony and thallium. All samples were affected. All non-detected antimony and thallium results were qualified as biased low (UL).

- Positive results greater than the method detection limit but less than the reporting limit were qualified as estimated (J).

Notes:

The serial dilution was analyzed on a sample that was not included on in this SDG and therefore not used to qualify sample results.

All samples were analyzed at a 5X dilution for all metals except mercury.

Samples MSA-SW38-030311, MSA-SW40-030311, and MSA-SW41-030311 were analyzed at 2X dilution for perchlorate.

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination results in the qualification of sample results as non-detected. The CRDL standard non-compliance for antimony and thallium resulted in the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993. The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	GFAA PDS - GFAA MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (e.g. base-line drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	% Difference between columns/detectors >25% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 03292	NSAMPLE	MSA-SW37-030311			MSA-SW38-030311			MSA-SW39-030311			MSA-SW40-030311		
SDG: A1C040534	LAB_ID	A1C040534002			A1C040534003			A1C040534004			A1C040534005		
FRACTION: MF	SAMP_DATE	3/3/2011			3/3/2011			3/3/2011			3/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.65	UL	C	0.65	UL	C	0.65	UL	C	0.65	UL	C
ARSENIC		2.6	J	P	2.7	J	P	2.6	J	P	3	J	P
BARIUM		30			22.2			17.9	B	A	15.6	B	A
BERYLLIUM		1	U		1	U		1	U		1	U	
CADMIUM		0.65	U		0.86	J	P	0.65	U		0.65	U	
CHROMIUM		3.6	U		3.6	U		3.6	U		3.6	U	
COBALT		1.4	J	P	3.6	J	P	1.6	J	P	0.98	J	P
COPPER		6.8	B	A	4.1	B	A	3.5	B	A	5.8	B	A
IRON		130	U		130	U		130	U		130	U	
LEAD		0.9	U		0.9	U		0.9	U		0.9	U	
MANGANESE		109			253			114			67.4		
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		1.6	J	P	1.3	J	P	1.2	J	P	1	J	P
NICKEL		2.6	J	P	2.9	J	P	2.5	J	P	2.3	J	P
SELENIUM		6	U		6	U		6	U		6	U	
SILVER		0.4	U		0.4	U		0.4	U		0.4	U	
THALLIUM		0.7	UL	C	0.7	UL	C	0.7	UL	C	0.7	UL	C
VANADIUM		2.2	U		2.2	U		2.2	U		2.2	U	
ZINC		18.1	B	A	20.1	B	A	14.8	B	A	24	B	A

PROJ_NO: 03292	NSAMPLE	MSA-SW41-030311
SDG: A1C040534	LAB_ID	A1C040534006
FRACTION: MF	SAMP_DATE	3/3/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
ANTIMONY	0.65	UL	C
ARSENIC	2.7	J	P
BARIUM	18.2	B	A
BERYLLIUM	1	U	
CADMIUM	0.65	U	
CHROMIUM	3.6	U	
COBALT	2.2	J	P
COPPER	4.3	B	A
IRON	130	U	
LEAD	0.9	U	
MANGANESE	161		
MERCURY	0.12	U	
MOLYBDENUM	1.6	J	P
NICKEL	3.4	J	P
SELENIUM	6	U	
SILVER	0.4	U	
THALLIUM	0.7	UL	C
VANADIUM	2.2	U	
ZINC	21.2	B	A

PROJ_NO: 03292	NSAMPLE	MSA-SW37-030311			MSA-SW38-030311			MSA-SW39-030311			MSA-SW40-030311		
SDG: A1C040534	LAB_ID	A1C040534002			A1C040534003			A1C040534004			A1C040534005		
FRACTION: M	SAMP_DATE	3/3/2011			3/3/2011			3/3/2011			3/3/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.65	UL	C	0.65	UL	C	0.65	UL	C	0.65	UL	C
ARSENIC		2.1	J	P	3.6	J	P	3.3	J	P	3.7	J	P
BARIUM		58.4			54			49.3			52.5		
BERYLLIUM		1	U		1	U		1	U		1	U	
CADMIUM		0.65	U		1.2	J	P	0.65	U		0.65	U	
CHROMIUM		4.5	J	P	7.1	J	P	3.6	U		4.5	J	P
COBALT		2	J	P	5.4			2.2	J	P	1.9	J	P
COPPER		16			19.5			7.6	B	A	18.1		
IRON		1670			2760			570			1490		
LEAD		5.5			6.3			1.5	J	P	4.3	J	P
MANGANESE		112			311			131			139		
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		1.3	J	P	1.3	J	P	1.2	J	P	1.2	J	P
NICKEL		3.2	J	P	5	J	P	3.5	J	P	3.2	J	P
SELENIUM		6	U		6	U		6	U		6	U	
SILVER		0.4	U		0.4	U		0.4	U		0.4	U	
THALLIUM		0.7	UL	C	0.7	UL	C	0.7	UL	C	0.7	UL	C
VANADIUM		2.9	J	P	5.2	J	P	2.2	U		3.5	J	P
ZINC		41.2	B	A	51.4	B	A	24.1	B	A	33.4	B	A

PROJ_NO: 03292	NSAMPLE	MSA-SW41-030311		
SDG: A1C040534	LAB_ID	A1C040534006		
FRACTION: M	SAMP_DATE	3/3/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.65	UL	C
ARSENIC		3.4	J	P
BARIUM		53.3		
BERYLLIUM		1	U	
CADMIUM		0.65	U	
CHROMIUM		3.6	U	
COBALT		2.2	J	P
COPPER		7	B	A
IRON		675		
LEAD		1.7	J	P
MANGANESE		136		
MERCURY		0.12	U	
MOLYBDENUM		1.3	J	P
NICKEL		2.6	J	P
SELENIUM		6	U	
SILVER		0.4	U	
THALLIUM		0.7	UL	C
VANADIUM		2.2	U	
ZINC		29.9	B	A

PROJ_NO: 03292 SDG: A1C040534 FRACTION: MISC MEDIA: WATER	NSAMPLE	MSA-SW37-030311			MSA-SW38-030311			MSA-SW39-030311			MSA-SW40-030311		
	LAB_ID	460-23660-1			460-23660-2			460-23660-3			460-23660-4		
	SAMP_DATE	3/3/2011			3/3/2011			3/3/2011			3/3/2011		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.56	U		0.56	U		0.56	U		0.56	U	
PERCHLORATE					0.72	U					0.72	U	

PROJ_NO: 03292	NSAMPLE	MSA-SW41-030311		
SDG: A1C040534	LAB_ID	460-23660-5		
FRACTION: MISC	SAMP_DATE	3/3/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.56	U	
PERCHLORATE		0.72	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW37-030311

TOTAL Metals

Lot-Sample #...: A1C040534-002 Matrix.....: WG
Date Sampled...: 03/03/11 12:30 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AQ
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	2.1 B,G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AC
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	58.4 J	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AD
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AE
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AF
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	2.0 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AG
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	4.5 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AV
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	16.0 J	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AH
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	1670	250	ug/L	SW846 6020	03/07-03/16/11	ME7501AJ
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	112	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AL
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW37-030311

TOTAL Metals

Lot-Sample #...: A1C040534-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	1.3 B,G	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501AM**
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	3.2 B,G	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501AN**
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	5.5	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501AK**
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AA
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AP
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AR
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	2.9 B,G	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501AT**
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	41.2 B,J,G	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501AU**
		Dilution Factor: 5		Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME7501AW
		Dilution Factor: 1		Analysis Time..: 14:52	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

TOTAL Metals

Lot-Sample #...: A1C040534-003 Matrix.....: WG
Date Sampled...: 03/03/11 13:00 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AT
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	3.6 B,G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AE
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	54.0 J	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AF
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AG
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	1.2 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AH
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	5.4	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AJ
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	7.1 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AX
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	19.5 J	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AK
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	2760	250	ug/L	SW846 6020	03/07-03/16/11	ME7571AL
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	311	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AN
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

TOTAL Metals

Lot-Sample #...: A1C040534-003 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	1.3 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AP
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	5.0 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AQ
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	6.3	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AM
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AD
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AR
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571AU
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	5.2 B,G	100	ug/L	SW846 6020	03/07-03/16/11	ME7571AV
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	51.4 B,J,G	100	ug/L	SW846 6020	03/07-03/16/11	ME7571AW
		Dilution Factor: 5		Analysis Time..: 19:01	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME7571A0
		Dilution Factor: 1		Analysis Time..: 15:05	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW39-030311

TOTAL Metals

Lot-Sample #...: A1C040534-004 Matrix.....: WG
Date Sampled...: 03/03/11 13:50 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A3
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	3.3 B,G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AN
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	49.3 J	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AP
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AQ
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AR
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	2.2 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AT
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A7
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	7.6 B,J,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AU
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	570	250	ug/L	SW846 6020	03/07-03/16/11	ME76F1AV
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	131	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AX
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW39-030311

TOTAL Metals

Lot-Sample #...: A1C040534-004 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	1.2 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A0
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	3.5 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A1
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	1.5 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AW
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AM
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A2
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A4
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME76F1A5
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	24.1 B,J,G	100	ug/L	SW846 6020	03/07-03/16/11	ME76F1A6
		Dilution Factor: 5		Analysis Time..: 19:10	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME76F1A8
		Dilution Factor: 1		Analysis Time..: 15:00	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

TOTAL Metals

Lot-Sample #...: A1C040534-005 Matrix.....: WG
Date Sampled...: 03/03/11 12:48 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1A5
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	3.7 B,G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AQ
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	52.5 J	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AR
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AT
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AU
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	1.9 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AV
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	4.5 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1A9
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	18.1 J	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AW
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	1490	250	ug/L	SW846 6020	03/07-03/16/11	ME76H1AX
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	139	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1A1
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				

(Continued on next page)

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

TOTAL Metals

Lot-Sample #...: A1C040534-005 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	**1.2 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1A2**
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	**3.2 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1A3**
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	**4.3 B,G**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1A0**
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AP
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1A4
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1A6
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	**3.5 B,G**	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1A7**
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	**33.4 B,J,G**	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1A8**
		Dilution Factor: 5		Analysis Time..: 19:20	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME76H1AA
		Dilution Factor: 1		Analysis Time..: 15:02	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

TOTAL Metals

Lot-Sample #...: A1C040534-006 Matrix.....: WG
Date Sampled...: 03/03/11 13:17 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A5
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	**3.4 B,G**	**25.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AQ**
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	**53.3 J**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AR**
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AT
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AU
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	**2.2 B,G**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AV**
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A9
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	**7.0 B,J,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AW**
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	**675**	**250**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AX**
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	**136**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1A1**
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

TOTAL Metals

Lot-Sample #...: A1C040534-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	1.3 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A2
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	2.6 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A3
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	1.7 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A0
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AP
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A4
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1A6
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME76P1A7
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	29.9 B,J,G	100	ug/L	SW846 6020	03/07-03/16/11	ME76P1A8
		Dilution Factor: 5		Analysis Time..: 19:29	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME76P1AA
		Dilution Factor: 1		Analysis Time..: 15:08	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW37-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-002 Matrix.....: WG
Date Sampled...: 03/03/11 12:30 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501CD
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	**2.6 B,G**	**25.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501A0**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	**30.0 J**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501A1**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501A2
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501A3
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	**1.4 B,G**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501A4**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7501CH
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	**6.8 B,J,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501A5**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	ND G	250	ug/L	SW846 6020	03/07-03/16/11	ME7501A6
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	**109**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501A8**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW37-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-002 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	**1.6 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501A9**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	**2.6 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501CA**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501A7
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7501AX
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7501CC
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7501CE
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME7501CF
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	**18.1 B,J,G**	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME7501CG**
		Dilution Factor: 5		Analysis Time..: 18:56	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME7501CJ
		Dilution Factor: 1		Analysis Time..: 14:59	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-003 Matrix.....: WG
Date Sampled...: 03/03/11 13:00 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CF
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	2.7 B,G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A2
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	22.2 J	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A3
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A4
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	0.86 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A5
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	3.6 B,G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A6
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CK
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	4.1 B,J,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A7
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	ND G	250	ug/L	SW846 6020	03/07-03/16/11	ME7571A8
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	253	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CA
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-003 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	1.3 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CC
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	2.9 B,G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CD
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A9
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME7571A1
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CE
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME7571CG
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME7571CH
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	20.1 B,J,G	100	ug/L	SW846 6020	03/07-03/16/11	ME7571CJ
		Dilution Factor: 5		Analysis Time..: 19:06	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME7571CL
		Dilution Factor: 1		Analysis Time..: 15:06	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW39-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-004 Matrix.....: WG
Date Sampled...: 03/03/11 13:50 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1CD
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	**2.6 B,G**	**25.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1AA**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	**17.9 J**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1AC**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AD
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AE
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	**1.6 B,G**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1AF**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1CH
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	**3.5 B,J,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1AG**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	ND G	250	ug/L	SW846 6020	03/07-03/16/11	ME76F1AH
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	**114**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1AK**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW39-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-004 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	1.2 B,G	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1AL**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	2.5 B,G	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1CA**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1AJ
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1A9
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1CC
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76F1CE
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME76F1CF
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	**14.8 B,J,G**	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76F1CG**
		Dilution Factor: 5		Analysis Time..: 19:15	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME76F1CJ
		Dilution Factor: 1		Analysis Time..: 15:01	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-005 Matrix.....: WG
Date Sampled...: 03/03/11 12:48 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1CF
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	**3.0 B,G**	**25.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1AD**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	**15.6 J**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1AE**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AF
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AG
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	**0.98 B,G**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1AH**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1CK
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	**5.8 B,J,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1AJ**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	ND G	250	ug/L	SW846 6020	03/07-03/16/11	ME76H1AK
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	**67.4**	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1CA**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				

(Continued on next page)

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-005 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	**1.0 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1CC**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	**2.3 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1CD**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AL
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1AC
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1CE
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76H1CG
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME76H1CH
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	**24.0 B,J,G**	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76H1CJ**
		Dilution Factor: 5		Analysis Time..: 19:25	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME76H1CL
		Dilution Factor: 1		Analysis Time..: 15:04	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-006 Matrix.....: WG
Date Sampled...: 03/03/11 13:17 Date Received..: 03/04/11

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 1066015						
Silver	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1CF
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Arsenic	2.7 B,G	**25.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AD**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Barium	18.2 J	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AE**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Beryllium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AF
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cadmium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AG
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Cobalt	2.2 B,G	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AH**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Chromium	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1CK
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Copper	4.3 B,J,G	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1AJ**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Iron	ND G	250	ug/L	SW846 6020	03/07-03/16/11	ME76P1AK
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Manganese	161	**5.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1CA**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				

(Continued on next page)

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

DISSOLVED Metals

Lot-Sample #...: A1C040534-006 Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	**1.6 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1CC**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Nickel	**3.4 B,G**	**10.0**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1CD**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Lead	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AL
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Antimony	ND G	10.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1AC
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Selenium	ND G	25.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1CE
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Thallium	ND G	5.0	ug/L	SW846 6020	03/07-03/16/11	ME76P1CG
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Vanadium	ND G	100	ug/L	SW846 6020	03/07-03/16/11	ME76P1CH
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Zinc	**21.2 B,J,G**	**100**	**ug/L**	**SW846 6020**	**03/07-03/16/11**	**ME76P1CJ**
		Dilution Factor: 5		Analysis Time..: 19:47	Analyst ID.....: 000079	
		Instrument ID..: I8				
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME76P1CL
		Dilution Factor: 1		Analysis Time..: 15:09	Analyst ID.....: 001576	
		Instrument ID..: H1				

NOTE(S):

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MSA-SW37-030311
Lab Sample ID: 460-23660-1

Lab Name: TestAmerica Edison
Job No.: 460-23660-1

SDG ID.: A1C040534

Matrix: Water
Date Sampled: 03/03/2011 12:30

Reporting Basis: WET
Date Received: 03/04/2011 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Chromium (hexavalent)	1.0	1.0	0.56	ug/L	U		1	7199

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MSA-SW38-030311 | Lab Sample ID: 460-23660-2

Lab Name: TestAmerica Edison | Job No.: 460-23660-1

SDG ID.: A1C040534

Matrix: Water | Date Sampled: 03/03/2011 13:00

Reporting Basis: WET | Date Received: 03/04/2011 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Chromium (hexavalent)	1.0	1.0	0.56	ug/L	U		1	7199

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MSA-SW39-030311 Lab Sample ID: 460-23660-3

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG ID.: A1C040534

Matrix: Water Date Sampled: 03/03/2011 13:50

Reporting Basis: WET Date Received: 03/04/2011 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Chromium (hexavalent)	1.0	1.0	0.56	ug/L	U		1	7199

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MSA-SW40-030311 Lab Sample ID: 460-23660-4

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG ID.: A1C040534

Matrix: Water Date Sampled: 03/03/2011 12:48

Reporting Basis: WET Date Received: 03/04/2011 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Chromium (hexavalent)	1.0	1.0	0.56	ug/L	U		1	7199

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MSA-SW41-030311 Lab Sample ID: 460-23660-5

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG ID.: A1C040534

Matrix: Water Date Sampled: 03/03/2011 13:17

Reporting Basis: WET Date Received: 03/04/2011 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
18540-29-9	Chromium (hexavalent)	1.0	1.0	0.56	ug/L	U		1	7199

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

General Chemistry

Lot-Sample #...: A1C040534-003 Work Order #...: ME757 Matrix.....: WG
Date Sampled...: 03/03/11 13:00 Date Received..: 03/04/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate	ND G	2.0	ug/L	MCAWW 314.0	03/09/11	1069295

Dilution Factor: 2

NOTE(S):

RL Reporting Limit

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

General Chemistry

Lot-Sample #...: A1C040534-005 Work Order #...: ME76H Matrix.....: WG
Date Sampled...: 03/03/11 12:48 Date Received..: 03/04/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate	ND G	2.0	ug/L	MCAWW 314.0	03/09/11	1069295

Dilution Factor: 2

NOTE(S):

RL Reporting Limit

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

General Chemistry

Lot-Sample #...: A1C040534-006 Work Order #...: ME76P Matrix.....: WG
Date Sampled...: 03/03/11 13:17 Date Received..: 03/04/11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate	ND G	2.0	ug/L	MCAWW 314.0	03/09/11	1069295

Dilution Factor: 2

NOTE(S):

RL Reporting Limit

G Elevated reporting limit The reporting limit is elevated due to matrix interference.

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

A1C040534

The following report contains the analytical results for five water samples and one quality control sample submitted to TestAmerica North Canton by Tetra Tech NUS, Inc from the MSA SURFACE WATER SAMPLING Site, project number 112IC03292. The samples were received March 04, 2011, according to documented sample acceptance procedures.

The 314.0 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory. Refer to the TestAmerica West Sacramento narrative included in their data package for additional information.

The 7199 Hexavalent Chromium analysis was performed at the TestAmerica Edison Laboratory. Refer to the TestAmerica Edison narrative included in their data package for additional information.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Kelly Carper and Tony Apanavage on March 17, 2011. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

CASE NARRATIVE (continued)

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.6°C.

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) had elevated reporting limits due to matrix interferences. Refer to the sample report pages for the affected analyte(s) flagged with "G".

CASE NARRATIVE (continued)

METALS (cont)

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

No ICP MS Form IX provided for batch(es) 1066015. The serial dilution was performed on a different sample from the same QC batch(es).

GENERAL CHEMISTRY

The sample(s) had elevated reporting limits due to matrix interferences. Refer to the sample report pages for the affected analyte(s) flagged with "G".

ANALYTICAL METHODS SUMMARY

A1C040534

PARAMETER	ANALYTICAL METHOD
ICP-MS (6020)	SW846 6020
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Perchlorate	MCAWW 314.0
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A1C040534

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ME75M	001	TB-030311	03/03/11	10:00
ME750	002	MSA-SW37-030311	03/03/11	12:30
ME757	003	MSA-SW38-030311	03/03/11	13:00
ME76F	004	MSA-SW39-030311	03/03/11	13:50
ME76H	005	MSA-SW40-030311	03/03/11	12:48
ME76P	006	MSA-SW41-030311	03/03/11	13:17

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

North Canton

Chain of Custody Record

TestAmerica 18
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apgarvage	Site Contact: Stu Cameron	Lab Contact: Pat O'Meara	COC No: 010579
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5552	Telephone: (703) 342-8384	Telephone: (330) 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apgarvage@Tetratech.com	Analysis Turnaround Time (CALENDAR DAYS or BUSINESS DAYS)	Analyses	
Phone: [redacted] (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA Surface Water Sampling	Method of Shipment/Carrier:			
Project Number: 112I03292 Task-02	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	VOCs	PAHs + 1,4-Dioxane	Perchlorate	Total PP.M	Dissolved PP.M	Sample Specific Notes / Special Instructions:
TB-030311	3/3/11	1000		X					2						G	X					
MSA-SW37-030311		1230		X					2						G				X	X	
MSA-SW38-030311		1300		X					2	3			3		G	X	X	X	X	X	
MSA-SW39-030311		1350		X					2						G				X	X	
MSA-SW40-030311		1248		X					2	3			3		G	X	X	X	X	X	
MSA-SW41-030311	↓	1317		X					2	3			3		G	X	X	X	X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	3/3/11 - 1600			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TAL	3/4/11 920

North Canton

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 440534
North Canton Facility

Client Texas Tech Project _____ By: _____
Cooler Received on 3-4-11 Opened on 3-4-11 (Signature)
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 1.6 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 100110-HNO_3; *Sulfuric Acid Lot#* 110410-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
37	LT LT	3/4/11	CSL
38	LT LT		
39	LT LT		
40	LT LT		
41	LT LT		

SDG A1C040534

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
M	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
HGF	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
CR6	UG/L	MSA-SW38-030311	460-23660-2	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW39-030311	460-23660-3	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW37-030311	460-23660-1	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW40-030311	460-23660-4	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW41-030311	460-23660-5	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
PCL	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/09/2011	03/09/2011	6	0	6
PCL	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/09/2011	03/09/2011	6	0	6
PCL	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/09/2011	03/09/2011	6	0	6
OV	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	TB-030311	A1C040534001	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	TB-030311	A1C040534001	TB	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW38-030311	A1C040534003	SUR	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW40-030311	A1C040534005	SUR	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW41-030311	A1C040534006	SUR	03/03/2011	03/05/2011	03/10/2011	2	5	7

Batch Number: **1066015**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: Lisa McGall (e-Signature)

Prep Date: 03/07/11 08:00 Prep End Date: 03/07/11 16:00
Due Date: 03/16/11

Lot	Work Order			ICP Weight	ICPMS Weight	Hg Weight
A1C070000 Water	ME88G	B	Due Date: SDG:		50 mL	100 mL
A1C070000 Water	ME88G	C	Due Date: SDG:		50 mL	100 mL
A1C040459 Water	ME7DJ Total		Due Date: 03/16/11 SDG:		50 mL	
A1C050451 Water	ME81V Total		Due Date: 03/17/11 SDG:		50 mL	100 mL
A1C040534 Water	ME750 Dissolved		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME750 Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME750 Total	S	Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME750 Total	X	Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME757 Dissolved		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME757 Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME76F Dissolved		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME76F Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME76H Dissolved		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME76H Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME76P Dissolved		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040534 Water	ME76P Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040558 Water	ME78T Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040558 Water	ME787 Total		Due Date: 03/18/11 SDG:		50 mL	100 mL
A1C040562 Water	ME79H Total		Due Date: 03/18/11 SDG:		50 mL	100 mL

Batch Number: **1066015**

TestAmerica Laboratories, Inc.
Metals Prep Log/ Batch Summary

Prepared By: Lisa McGall (e-Signature)

Prep Date: 03/07/11 08:00 Prep End Date: 03/07/11 16:00
Due Date: 03/16/11

Lot	Work Order	ICP Weight	ICPMS Weight	Hg Weight
	LEVEL 2			
	BLANK AND CHECK STANDARD ON BATCH	X		
	MS/MSD AND PDS ON BATCH	X		
	CORRECT SPIKES ADDED	X		
	SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG	X		

Comments:

B-BLANK; C-CHECK SAMPLE; L-CHECK SAMPLE DUPLICATE; P-SERIAL DILUTION; S-MATRIX SPIKE SAMPLE; D-MATRIX SPIKE DUPLICATE SAMPLE

Unless otherwise noted, final volumes are as follows: Soils - 100 mL. Waters - ICP and ICPMS - 50 mL, Hg - 100 mL.

Low Level Hg: final volumes are 40 mL.

ICPMS ELEMENTS WITHIN THE BATCH:

AG AL AS BA BE CD CO CR CU FE MN MO NI PB SB SE SN TL VX ZN

Matrix Spike Information:

ME750	Hg	ICPMS-1	ICPMS-2

Check Sample Information:

ME88G	Hg	ICPMS-1	ICPMS-2

Prep Method(s): MCAWW 200.8, MCAWW 245.1, SW846 3005A, SW846 7470A

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A1C040534 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A1C070000-015 **Prep Batch #...:** 1066015						
Antimony	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AA
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Arsenic	ND	5.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AC
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Barium	0.88 B	**1.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1AD**
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Beryllium	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AE
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Cadmium	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AF
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Chromium	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AV
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Cobalt	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AG
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Copper	0.44 B	**2.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1AH**
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Iron	ND	50.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AJ
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Lead	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AK
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Manganese	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AL
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	

(Continued on next page)

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A1C040534 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AM
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Nickel	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AN
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Selenium	ND	5.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AP
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Silver	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AQ
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Thallium	0.20 B	**1.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1AR**
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Vanadium	ND	20.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1AT
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Zinc	8.1 B	**20.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1AU**
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME88G1AW
		Dilution Factor: 1				
		Analysis Time..: 14:50		Analyst ID.....: 001576	Instrument ID..: H1	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C040534 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A1C070000-015 **Prep Batch #...:** 1066015					
Antimony	87	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1AX
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Arsenic	86	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A0
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Barium	84	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A1
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Beryllium	85	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A2
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Cadmium	90	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A3
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Cobalt	86	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A4
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Copper	89	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A5
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Iron	88	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A6
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Lead	97	(80 - 120)	SW846 6020	03/07-03/16/11	ME88G1A7
		Dilution Factor: 1	Analysis Time..: 18:12	Analyst ID.....: 000079	
		Instrument ID..: I8			
Manganese	97	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1A8
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C040534 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	85	(80 - 120)	SW846 6020	03/07-03/16/11	ME88G1A9
		Dilution Factor: 1	Analysis Time..: 18:12	Analyst ID.....: 000079	
		Instrument ID..: I8			
Nickel	88	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1CA
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Selenium	87	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1CC
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Silver	92	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1CD
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Thallium	88	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1CE
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Vanadium	84	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1CF
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Zinc	101	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1CG
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Chromium	88	(80 - 120)	SW846 6020	03/07-03/16/11	ME88G1CH
		Dilution Factor: 1	Analysis Time..: 18:12	Analyst ID.....: 000079	
		Instrument ID..: I8			
Mercury	99	(81 - 123)	SW846 7470A	03/07-03/09/11	ME88G1CJ
		Dilution Factor: 1	Analysis Time..: 14:51	Analyst ID.....: 001576	
		Instrument ID..: H1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C040534 **Matrix.....:** WG
Date Sampled...: 03/03/11 12:30 **Date Received..:** 03/04/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A1C040534-002 **Prep Batch #...:** 1066015					
Antimony	98	(44 - 153)	SW846 6020	03/07-03/16/11	ME7501CL
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Arsenic	96	(82 - 123)	SW846 6020	03/07-03/16/11	ME7501CM
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Barium	103	(45 - 144)	SW846 6020	03/07-03/16/11	ME7501CN
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Beryllium	92	(77 - 124)	SW846 6020	03/07-03/16/11	ME7501CP
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Cadmium	95	(78 - 117)	SW846 6020	03/07-03/16/11	ME7501CQ
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Chromium	94	(72 - 110)	SW846 6020	03/07-03/16/11	ME7501C6
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Cobalt	93	(67 - 114)	SW846 6020	03/07-03/16/11	ME7501CR
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Copper	92	(60 - 123)	SW846 6020	03/07-03/16/11	ME7501CT
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Iron	99	(22 - 169)	SW846 6020	03/07-03/16/11	ME7501CU
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Lead	100	(73 - 115)	SW846 6020	03/07-03/16/11	ME7501CV
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A1C040534 **Matrix.....:** WG
Date Sampled...: 03/03/11 12:30 **Date Received..:** 03/04/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese	92	(10 - 172)	SW846 6020	03/07-03/16/11	ME7501CW
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Molybdenum	95	(80 - 110)	SW846 6020	03/07-03/16/11	ME7501CX
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Nickel	93	(72 - 111)	SW846 6020	03/07-03/16/11	ME7501C0
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Selenium	94	(72 - 148)	SW846 6020	03/07-03/16/11	ME7501C1
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Silver	97	(10 - 139)	SW846 6020	03/07-03/16/11	ME7501C2
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Thallium	98	(69 - 117)	SW846 6020	03/07-03/16/11	ME7501C3
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Vanadium	97	(70 - 112)	SW846 6020	03/07-03/16/11	ME7501C4
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Zinc	122	(49 - 156)	SW846 6020	03/07-03/16/11	ME7501C5
		Dilution Factor: 5	Analysis Time..: 18:26	Instrument ID..: I8	
		Analyst ID.....: 000079			
Mercury	100	(69 - 134)	SW846 7470A	03/07-03/09/11	ME7501C7
		Dilution Factor: 1	Analysis Time..: 14:52	Instrument ID..: H1	
		Analyst ID.....: 001576			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

Metals

Client Lot #...: A1C040534 **Work Order #...:** ME750-SMP ME750-DUP **Matrix.....:** WG

Date Sampled...: 03/03/11 12:30 **Date Received..:** 03/04/11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Silver						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	200	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Arsenic						SD Lot-Sample #: A1C040534-002		
	2.1 B,G	2.5 B,G	ug/L	14	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Barium						SD Lot-Sample #: A1C040534-002		
	58.4 J	60.2	ug/L	3.1	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Beryllium						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	0	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Cadmium						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	11	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Cobalt						SD Lot-Sample #: A1C040534-002		
	2.0 B,G	2.2 B,G	ug/L	9.4	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Chromium						SD Lot-Sample #: A1C040534-002		
	4.5 B,G	4.5 B,G	ug/L	0.44	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Copper						SD Lot-Sample #: A1C040534-002		
	16.0 J	15.8	ug/L	1.2	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					
Iron						SD Lot-Sample #: A1C040534-002		
	1670	1760	ug/L	5.0	(0-20)	SW846 6020	03/07-03/16/11	1066015
			Dilution Factor: 5			Analysis Time..: 18:26	Analyst ID.....: 000079	
			Instrument ID..: I8					

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SAMPLE DUPLICATE EVALUATION REPORT

Metals

Lot-Sample #...: A1C040534-000 **Work Order #...:** ME750-SMP ME750-DUP **Matrix.....:** WG

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Manganese						SD Lot-Sample #: A1C040534-002		
	112	117	ug/L	4.2	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Molybdenum						SD Lot-Sample #: A1C040534-002		
	1.3 B,G	1.3 B,G	ug/L	0.39	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Nickel						SD Lot-Sample #: A1C040534-002		
	3.2 B,G	3.5 B,G	ug/L	7.3	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Lead						SD Lot-Sample #: A1C040534-002		
	5.5	5.7	ug/L	3.4	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Antimony						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	0	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Selenium						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	0	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Thallium						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	0	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Vanadium						SD Lot-Sample #: A1C040534-002		
	2.9 B,G	2.2 B,G	ug/L	28	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						
Zinc						SD Lot-Sample #: A1C040534-002		
	41.2 B,J,G	40.1 B,G	ug/L	2.6	(0-20)	SW846 6020	03/07-03/16/11	1066015
		Dilution Factor: 5				Analysis Time..: 18:26	Analyst ID.....: 000079	
		Instrument ID..: I8						

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SAMPLE DUPLICATE EVALUATION REPORT

Metals

Lot-Sample #...: A1C040534-000 **Work Order #...:** ME750-SMP ME750-DUP **Matrix.....:** WG

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Mercury						SD Lot-Sample #: A1C040534-002		
	ND	ND	ug/L	0	(0-20)	SW846 7470A	03/07-03/09/11	1066015

Dilution Factor: 1 Analysis Time..: 14:52 Analyst ID.....: 001576
Instrument ID..: H1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A1C040534 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A1C070000-015 **Prep Batch #...:** 1066015						
Antimony	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1CX
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Arsenic	ND	5.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C0
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Barium	0.88 B	**1.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1C1**
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Beryllium	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C2
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Cadmium	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C3
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Chromium	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1DH
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Cobalt	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C4
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Copper	0.44 B	**2.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1C5**
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Iron	ND	50.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C6
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Lead	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C7
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	
Manganese	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C8
		Dilution Factor: 1				
		Analysis Time..: 15:48	Analyst ID.....: 000079		Instrument ID..: I8	

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: A1C040534 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1C9
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Nickel	ND	2.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1DA
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Selenium	ND	5.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1DC
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Silver	ND	1.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1DD
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Thallium	**0.20 B**	**1.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1DE**
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Vanadium	ND	20.0	ug/L	SW846 6020	03/07-03/11/11	ME88G1DF
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Zinc	**8.1 B**	**20.0**	**ug/L**	**SW846 6020**	**03/07-03/11/11**	**ME88G1DG**
		Dilution Factor: 1				
		Analysis Time..: 15:48		Analyst ID.....: 000079	Instrument ID..: I8	
Mercury	ND	0.20	ug/L	SW846 7470A	03/07-03/09/11	ME88G1DJ
		Dilution Factor: 1				
		Analysis Time..: 14:50		Analyst ID.....: 001576	Instrument ID..: H1	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A1C040534 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A1C070000-015 Prep Batch #...: 1066015					
Antimony	87	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D3
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Arsenic	86	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D4
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Barium	84	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D5
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Beryllium	85	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D6
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Cadmium	90	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D7
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Cobalt	86	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D8
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Copper	89	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1D9
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Iron	88	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EA
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Lead	82	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EC
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Manganese	97	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1ED
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: A1C040534 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	84	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EE
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Nickel	88	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EF
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Selenium	87	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EG
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Silver	92	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EH
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Thallium	88	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EJ
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Vanadium	84	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EK
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Zinc	101	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EL
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Chromium	84	(80 - 120)	SW846 6020	03/07-03/11/11	ME88G1EM
		Dilution Factor: 1	Analysis Time..: 15:53	Analyst ID.....: 000079	
		Instrument ID..: I8			
Mercury	99	(81 - 123)	SW846 7470A	03/07-03/09/11	ME88G1EN
		Dilution Factor: 1	Analysis Time..: 14:51	Analyst ID.....: 001576	
		Instrument ID..: H1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica North Canton

Metals Data Reporting Form

Instrument Detection Limits

Instrument: CVAA **Units:** ppb

Element	Wavelength	Reporting Limit	MDL	Date of MDL
Mercury	253.700	0.2	0.12	09/20/07

TestAmerica North Canton

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPMS **Units:** ppb

Element	Mass	Reporting Limit	MDL	Date of MDL
Antimony	121	2.0	0.13	05/09/07
Arsenic	75	5.0	0.40	05/09/07
Barium	137	1.0	0.19	05/09/07
Beryllium	9	1.0	0.20	05/09/07
Cadmium	111	1.0	0.13	10/01/07
Chromium	52	2.0	0.71	05/09/07
Cobalt	59	1.0	0.058	05/09/07
Copper	65	2.0	0.29	10/01/07
Iron	56	50.0	26.0	10/01/07
Lead	208	1.0	0.18	05/09/07
Manganese	55	1.0	0.83	05/09/07
Molybdenum	95	2.0	0.093	05/09/07
Nickel	60	2.0	0.20	05/09/07
Selenium	78	5.0	1.2	05/09/07
Silver	107	1.0	0.080	05/09/07
Thallium	205	1.0	0.14	05/09/07
Vanadium	51	20.0	0.44	05/09/07
Zinc	66	20.0	2.3	10/01/07

TestAmerica North Canton

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPMS **Units:** ppb

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Antimony	121.00	1000	01/10/11
Arsenic	75.00	10000	01/12/11
Barium	137.00	10000	01/12/11
Beryllium	9.00	10000	01/10/11
Cadmium	111.00	10000	01/10/11
Chromium	52.00	10000	01/10/11
Cobalt	59.00	10000	01/10/11
Copper	65.00	10000	01/10/11
Iron	56.00	500000	01/12/11
Lead	208.00	10000	01/10/11
Manganese	55.00	10000	01/10/11
Molybdenum	95.00	10000	01/13/11
Nickel	60.00	10000	01/10/11
Selenium	78.00	10000	01/10/11
Silver	107.00	2000	01/10/11
Thallium	205.00	10000	01/10/11
Vanadium	51.00	10000	01/10/11
Zinc	66.00	10000	01/10/11

: Instrument Upload Run Log - Page 1 :
: Started Thu Mar 10 03:10:23 2011 by COUNTSK :
: Data File: UPL$CAN_DATA_ROOT:<LHG>HG10309A.PRN;1 :

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	STD1REP1	1	09-MAR-2011	10:58:10			H1
2	STD2REP1	1	09-MAR-2011	10:59:27			H1
3	STD3REP1	1	09-MAR-2011	11:00:48			H1
4	STD4REP1	1	09-MAR-2011	11:02:17			H1
5	STD5REP1	1	09-MAR-2011	11:03:38			H1
6	STD6REP1	1	09-MAR-2011	11:04:53			H1
7	CK5ICV	1	09-MAR-2011	11:06:19			H1
8	CK4ICB	1	09-MAR-2011	11:07:34			H1
9	MEN68/CEA/	1 MEN7F	09-MAR-2011	11:08:49	1068195	A1B220518	H1
10	CK2CCV	1	09-MAR-2011	11:10:04			H1
11	CK1CCB	1	09-MAR-2011	11:11:19			H1
12	ME6R1B	1	09-MAR-2011	11:12:43	1063012	A1C040000	H1
13	ME6R1C	1	09-MAR-2011	11:14:10	1063012	A1C040000	H1
14	ME5TL	1	09-MAR-2011	11:15:26	1063012	A1C030508	H1
15	ME5TLS	1	09-MAR-2011	11:16:40	1063012	A1C030508	H1
16	ME5TLD	1	09-MAR-2011	11:18:05	1063012	A1C030508	H1
17	ME598	1	09-MAR-2011	11:19:22	1063012	1C03548	H1
18	ME5AG	1	09-MAR-2011	11:21:09	1063012	A1C030434	H1
19	ME5TK	1	09-MAR-2011	11:22:39	1063012	A1C030508	H1
20	ME5TJ	1	09-MAR-2011	11:23:56	1063012	A1C030508	H1
21	ME6AD	1	09-MAR-2011	11:25:12	1063012	1C03548	H1
22	CK2CCV	1	09-MAR-2011	11:26:37			H1
23	CK1CCB	1	09-MAR-2011	11:27:55			H1
24	ME6CA	1	09-MAR-2011	11:29:20	1063012	A1C030554	H1
25	ME6AT	1	09-MAR-2011	11:30:35	1063012	1C03548	H1
26	ME6AM	1	09-MAR-2011	11:32:03	1063012	1C03548	H1
27	ME5AE	1	09-MAR-2011	11:33:29	1063012	A1C030434	H1
28	ME5TG	1	09-MAR-2011	11:34:48	1063012	A1C030508	H1
29	ME5AL	1	09-MAR-2011	11:36:04	1063012	A1C030434	H1
30	ME88EB	1	09-MAR-2011	11:37:51	1066014	A1C070000	H1
31	ME88EC	1	09-MAR-2011	11:39:12	1066014	A1C070000	H1
32	ME703	1	09-MAR-2011	11:40:27	1066014	A1C040503	H1
33	ME703S	1	09-MAR-2011	11:41:45	1066014	A1C040503	H1
34	CK2CCV	1	09-MAR-2011	11:43:12			H1
35	CK1CCB	1	09-MAR-2011	11:44:29			H1
36	ME703D	1	09-MAR-2011	11:45:54	1066014	A1C040503	H1
37	ME77C	1	09-MAR-2011	11:47:09	1066014	1C03588	H1
38	ME7AQ	1	09-MAR-2011	11:48:30	1066014	A1C040451	H1
39	ME7AV	1	09-MAR-2011	11:49:45	1066014	A1C040451	H1
40	ME709	1	09-MAR-2011	11:51:00	1066014	A1C040503	H1
41	ME7CG	1	09-MAR-2011	11:52:17	1066014	A1C040456	H1
42	ME7CH	1	09-MAR-2011	11:53:32	1066014	A1C040456	H1
43	ME7AK	1	09-MAR-2011	11:54:47	1066014	A1C040451	H1
44	ME76V	1	09-MAR-2011	11:56:12	1066014	1C03588	H1

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	ME71E	1	09-MAR-2011	11:57:29	1066014	A1C040503	H1
46	CK2CCV	1	09-MAR-2011	11:58:47			H1
47	CK1CCB	1	09-MAR-2011	12:00:07			H1
48	ME71F	1	09-MAR-2011	12:01:32	1066014	A1C040503	H1
49	ME7CF	1	09-MAR-2011	12:02:48	1066014	A1C040456	H1
50	ME7AT	1	09-MAR-2011	12:04:09	1066014	A1C040451	H1
51	ME7CD	1	09-MAR-2011	12:05:25	1066014	A1C040456	H1
52	ME71J	1	09-MAR-2011	12:06:42	1066014	A1C040503	H1
53	ME71L	1	09-MAR-2011	12:07:56	1066014	A1C040503	H1
54	ME9CCBT	1	09-MAR-2011	12:09:10	1067013	A1C070000	H1
55	MFANFBT	1	09-MAR-2011	12:10:31	1067013	A1C080000	H1
56	MFANFCT	1	09-MAR-2011	12:11:47	1067013	A1C080000	H1
57	ME4L1T	1	09-MAR-2011	12:13:05	1067013	A1C020573	H1
58	CK2CCV	1	09-MAR-2011	12:14:20			H1
59	CK1CCB	1	09-MAR-2011	12:15:36			H1
60	ME4L1ST	1	09-MAR-2011	12:16:52	1067013	A1C020573	H1
61	ME4L1DT	1	09-MAR-2011	12:18:09	1067013	A1C020573	H1
62	ME6C0T	1	09-MAR-2011	12:19:27	1067013	A1C030563	H1
63	ME56AT	1	09-MAR-2011	12:20:54	1067013	A1C030535	H1
64	ME58VT	1	09-MAR-2011	12:22:12	1067013	A1C030535	H1
65	ME4MPT	1	09-MAR-2011	12:23:27	1067013	A1C020573	H1
66	ME4M8T	1	09-MAR-2011	12:24:44	1067013	A1C020573	H1
67	ME6C2T	1	09-MAR-2011	12:26:01	1067013	A1C030561	H1
68	ME70XT	1	09-MAR-2011	12:27:32	1067013	A1C040503	H1
69	ME6DAT	1	09-MAR-2011	12:29:09	1067013	A1C030563	H1
70	CK2CCV	1	09-MAR-2011	12:30:26			H1
71	CK1CCB	1	09-MAR-2011	12:31:40			H1
72	ME8D2T	1	09-MAR-2011	12:32:55	1067013	A1C040584	H1
73	ME59JT	1	09-MAR-2011	12:34:25	1067013	A1C030535	H1
74	ME26QBT	1	09-MAR-2011	12:35:41	1063013	A1C020000	H1
75	ME6R3BT	1	09-MAR-2011	12:37:03	1063013	A1C040000	H1
76	ME6R3CT	1	09-MAR-2011	12:38:33	1063013	A1C040000	H1
77	ME2N6T	1	09-MAR-2011	12:39:52	1063013	A1C010549	H1
78	ME2N6ST	1	09-MAR-2011	12:41:17	1063013	A1C010549	H1
79	ME2N6DT	1	09-MAR-2011	12:42:43	1063013	A1C010549	H1
80	ME26LBT	1	09-MAR-2011	12:43:59	1063014	A1C020000	H1
81	ME6R5BT	1	09-MAR-2011	12:45:17	1063014	A1C040000	H1
82	CK2CCV	1	09-MAR-2011	12:46:36			H1
83	CK1CCB	1	09-MAR-2011	12:47:50			H1
84	ME6R5CT	1	09-MAR-2011	12:49:05	1063014	A1C040000	H1
85	ME2K8T	1	09-MAR-2011	12:50:24	1063014	A1C010534	H1
86	ME2K8ST	1	09-MAR-2011	12:51:55	1063014	A1C010534	H1
87	ME2K8DT	1	09-MAR-2011	12:53:16	1063014	A1C010534	H1
88	ME2LCT	1	09-MAR-2011	12:54:35	1063014	A1C010534	H1

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
89	ME6RXB	1	09-MAR-2011	12:55:51	1063011	A1C040000	H1
90	ME6RXC	1	09-MAR-2011	12:57:12	1063011	A1C040000	H1
91	ME5JQ	1	09-MAR-2011	12:58:29	1063011	A1C030470	H1
92	ME5JQS	1	09-MAR-2011	12:59:46	1063011	A1C030470	H1
93	ME5JQD	1	09-MAR-2011	13:01:05	1063011	A1C030470	H1
94	CK2CCV	1	09-MAR-2011	13:02:20			H1
95	CK1CCB	1	09-MAR-2011	13:03:35			H1
96	ME5J4	1	09-MAR-2011	13:04:50	1063011	A1C030470	H1
97	ME5J2	1	09-MAR-2011	13:06:17	1063011	A1C030470	H1
98	ME5J5	1	09-MAR-2011	13:07:33	1063011	A1C030470	H1
99	ME5J1	1	09-MAR-2011	13:08:50	1063011	A1C030470	H1
100	ME5LH	1	09-MAR-2011	13:10:11	1063011	A1C030482	H1
101	ME5K3BT	1	09-MAR-2011	13:11:31	1063020	A1C030000	H1
102	ME6TDBT	1	09-MAR-2011	13:12:48	1063020	A1C040000	H1
103	ME6TDCT	1	09-MAR-2011	13:14:15	1063020	A1C040000	H1
104	ME379T	1	09-MAR-2011	13:15:34	1063020	A1C020519	H1
105	ME379ST	1	09-MAR-2011	13:16:52	1063018	A1C020519	H1
106	CK2CCV	1	09-MAR-2011	13:18:07			H1
107	CK1CCB	1	09-MAR-2011	13:19:34			H1
108	ME379DT	1	09-MAR-2011	13:20:50	1063018	A1C020519	H1
109	CK2CCV	1	09-MAR-2011	13:22:07			H1
110	CK1CCB	1	09-MAR-2011	13:23:22			H1
111	CK2CCV	1	09-MAR-2011	13:27:03			H1
112	CK1CCB	1	09-MAR-2011	13:28:17			H1
113	ME6AD	2	09-MAR-2011	13:29:42	1063012	1C03548	H1
114	ME6AT	20	09-MAR-2011	13:30:59	1063012	1C03548	H1
115	ME6AM	20	09-MAR-2011	13:32:19	1063012	1C03548	H1
116	ME76V	2	09-MAR-2011	13:33:36	1066014	1C03588	H1
117	CK2CCV	1	09-MAR-2011	13:34:52			H1
118	CK1CCB	1	09-MAR-2011	13:36:07			H1
119	CK2CCV	1	09-MAR-2011	13:48:20			H1
120	CK1CCB	1	09-MAR-2011	13:49:36			H1
121	ME6AT	50	09-MAR-2011	13:50:51	1063012	1C03548	H1
122	ME6AM	100	09-MAR-2011	13:52:19	1063012	1C03548	H1
123	CK2CCV	1	09-MAR-2011	13:53:36			H1
124	CK1CCB	1	09-MAR-2011	13:54:52			H1
125	CK2CCV	1	09-MAR-2011	14:25:11			H1
126	CK1CCB	1	09-MAR-2011	14:26:26			H1
127	ME5K9BT	1	09-MAR-2011	14:27:53	1063015	A1C030000	H1
128	ME6R7BT	1	09-MAR-2011	14:29:20	1063015	A1C040000	H1
129	ME6R7CT	1	09-MAR-2011	14:30:46	1063015	A1C040000	H1
130	ME4M2T	1	09-MAR-2011	14:32:00	1063015	A1C020573	H1
131	ME4M2ST	1	09-MAR-2011	14:33:15	1063015	A1C020573	H1
132	ME4M2BT	1	09-MAR-2011	14:34:31	1063015	A1C020573	H1

D 3/10/11 lw

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
133	ME4NLT	1	09-MAR-2011	14:35:48	1063015	A1C020573	H1
134	ME4NHT	1	09-MAR-2011	14:37:03	1063015	A1C020573	H1
135	ME4NDT	1	09-MAR-2011	14:38:33	1063015	A1C020573	H1
136	ME4NKT	1	09-MAR-2011	14:39:58	1063015	A1C020573	H1
137	CK2CCV	1	09-MAR-2011	14:41:13			H1
138	CK1CCB	1	09-MAR-2011	14:42:28			H1
139	ME4PMT	1	09-MAR-2011	14:43:43	1063015	A1C020577	H1
140	ME4P4T	1	09-MAR-2011	14:45:03	1063015	A1C020582	H1
141	ME4PXT	1	09-MAR-2011	14:46:18	1063015	A1C020580	H1
142	ME4NFT	1	09-MAR-2011	14:47:32	1063015	A1C020573	H1
143	ME4A1T	1	09-MAR-2011	14:48:49	1063015	A1C020534	H1
144	ME88GB	1	09-MAR-2011	14:50:05	1066015	A1C070000	H1
145	ME88GC	1	09-MAR-2011	14:51:24	1066015	A1C070000	H1
146	ME750	1	09-MAR-2011	14:52:40	1066015	A1C040534	H1
147	ME750X	1	09-MAR-2011	14:53:59	1066015	A1C040534	H1
148	ME750S	1	09-MAR-2011	14:55:15	1066015	A1C040534	H1
149	CK2CCV	1	09-MAR-2011	14:56:30			H1
150	CK1CCB	1	09-MAR-2011	14:57:45			H1
151	ME750F	1	09-MAR-2011	14:59:01	1066015	A1C040534	H1
152	ME76F	1	09-MAR-2011	15:00:17	1066015	A1C040534	H1
153	ME76FF	1	09-MAR-2011	15:01:32	1066015	A1C040534	H1
154	ME76H	1	09-MAR-2011	15:02:51	1066015	A1C040534	H1
155	ME76HF	1	09-MAR-2011	15:04:07	1066015	A1C040534	H1
156	ME757	1	09-MAR-2011	15:05:25	1066015	A1C040534	H1
157	ME757F	1	09-MAR-2011	15:06:39	1066015	A1C040534	H1
158	ME76P	1	09-MAR-2011	15:08:07	1066015	A1C040534	H1
159	ME76PF	1	09-MAR-2011	15:09:24	1066015	A1C040534	H1
160	ME81V	1	09-MAR-2011	15:10:41	1066015	A1C050451	H1
161	CK2CCV	1	09-MAR-2011	15:12:08			H1
162	CK1CCB	1	09-MAR-2011	15:13:25			H1
163	ME787	1	09-MAR-2011	15:14:40	1066015	A1C040558	H1
164	ME78T	1	09-MAR-2011	15:15:59	1066015	A1C040558	H1
165	ME79H	1	09-MAR-2011	15:17:18	1066015	A1C040562	H1
166	MFANDB	1	09-MAR-2011	15:18:34	1067011	A1C080000	H1
167	MFANDC	1	09-MAR-2011	15:19:50	1067011	A1C080000	H1
168	ME96P	1	09-MAR-2011	15:21:05	1067011	A1C070475	H1
169	ME96PS	1	09-MAR-2011	15:22:22	1067011	A1C070475	H1
170	ME96PD	1	09-MAR-2011	15:23:38	1067011	A1C070475	H1
171	ME9KD	1	09-MAR-2011	15:24:54	1067011	A1C070417	H1
172	ME9KK	1	09-MAR-2011	15:26:10	1067011	A1C070417	H1
173	CK2CCV	1	09-MAR-2011	15:27:25			H1
174	CK1CCB	1	09-MAR-2011	15:28:40			H1
175	ME928	1	09-MAR-2011	15:29:56	1067011	A1C070455	H1
176	ME9A7B	1	09-MAR-2011	15:31:12	1067014	A1C070000	H1

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
177	MFANHB	1	09-MAR-2011	15:32:29	1067014	A1C080000	H1
178	MFANHC	1	09-MAR-2011	15:33:49	1067014	A1C080000	H1
179	ME75E	1	09-MAR-2011	15:35:08	1067014	A1C040530	H1
180	ME75ES	1	09-MAR-2011	15:36:24	1067014	A1C040530	H1
181	ME75ED	1	09-MAR-2011	15:37:42	1067014	A1C040530	H1
182	MFA5KBT	1	09-MAR-2011	15:38:59	1068012	A1C080000	H1
183	MFDPXBT	1	09-MAR-2011	15:40:18	1068012	A1C090000	H1
184	MFDPXCT	1	09-MAR-2011	15:41:35	1068012	A1C090000	H1
185	CK2CCV	1	09-MAR-2011	15:42:51			H1
186	CK1CCB	1	09-MAR-2011	15:44:17			H1
187	ME6J6T	1	09-MAR-2011	15:45:36	1068012	A1C030592	H1
188	ME6J6ST	1	09-MAR-2011	15:46:51	1068012	A1C030592	H1
189	ME6J6DT	1	09-MAR-2011	15:48:08	1068012	A1C030592	H1
190	ME7GTT	1	09-MAR-2011	15:49:24	1068012	A1C040464	H1
191	ME7GRT	1	09-MAR-2011	15:50:41	1068012	A1C040464	H1
192	MFATDT	1	09-MAR-2011	15:51:58	1068012	A1C080408	H1
193	MFAR2T	1	09-MAR-2011	15:53:15	1068012	A1C080408	H1
194	MFDPVB	1	09-MAR-2011	15:54:33	1068011	A1C090000	H1
195	MFDPVC	1	09-MAR-2011	15:55:49	1068011	A1C090000	H1
196	MFCEG	1	09-MAR-2011	15:57:28	1068011	A1C080465	H1
197	CK2CCV	1	09-MAR-2011	15:58:43			H1
198	CK1CCB	1	09-MAR-2011	15:59:58			H1
199	MFCEGS	1	09-MAR-2011	16:01:14	1068011	A1C080465	H1
200	MFCEGD	1	09-MAR-2011	16:02:30	1068011	A1C080465	H1
201	CK2CCV	1	09-MAR-2011	16:03:47			H1
202	CK1CCB	1	09-MAR-2011	16:05:13			H1
203	CK2CCV	1	09-MAR-2011	16:07:09			H1
204	CK1CCB	1	09-MAR-2011	16:08:25			H1
205	ME9KD	20	09-MAR-2011	16:09:43	1067011	A1C070417	H1
206	CK2CCV	1	09-MAR-2011	16:11:01			H1
207	CK1CCB	1	09-MAR-2011	16:12:16			H1

End of Report

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAA **Units:** ug/L

Chart Number: hg10309a.prn **Acceptable Range:** 90% - 110%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	Ck5ICV 03/09/11 11:06 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	2.5	2.45	**98.1**								

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: hg10309a.prn **Acceptable Range:** 80% - 120%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	Ck2CCV 03/09/11 2:41 PM Found	% Rec	Ck2CCV 03/09/11 2:56 PM Found	% Rec	Ck2CCV 03/09/11 3:12 PM Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5.0	4.82	**96.4**	4.85	**97.0**	4.84	**96.9**				

TestAmerica North Canton

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: CVAA **Units:** ug/L

Chart Number: hg10309a.prn **Acceptable Range:** 50% - 150%

Standard Source: Ultra **Standard ID:**

Element	WL/ Mass	True Conc	Ck3CRA\MRL 03/09/11 11:08 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	0.2	0.18	**89.9**								

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg10309a.prn

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	Ck4ICB 03/09/11 11:07 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	U								

U Result is less than the MDL

B Result is between MDL and RL

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: hg10309a.prn

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	Ck1CCB 03/09/11 2:42 PM Found	Q	Ck1CCB 03/09/11 2:57 PM Found	Q	Ck1CCB 03/09/11 3:13 PM Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.1	U	**-0.1**	**B**	0.1	U				

U Result is less than the MDL

B Result is between MDL and RL

: Instrument Upload Run Log - Page 1 :
: Started Fri Mar 18 03:41:42 2011 by DAVIESB :
: Data File: UPL$CAN_DATA_ROOT:<REP>I80316A.CSV;1 :

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	STD1	1	16-MAR-2011	14:12:11			I8
2	STD2	1	16-MAR-2011	14:17:28			I8
3	STD3	1	16-MAR-2011	14:24:24			I8
4	STD4	1	16-MAR-2011	14:31:20			I8
5	ICV	1	16-MAR-2011	14:38:18			I8
6	ICB	1	16-MAR-2011	14:45:16			I8
7	CRI	1	16-MAR-2011	14:51:36			I8
8	ICSA	1	16-MAR-2011	14:56:41			I8
9	ICSAB	1	16-MAR-2011	15:01:26			I8
10	CCV	1	16-MAR-2011	15:08:23			I8
11	CCB	1	16-MAR-2011	15:15:18			I8
12	MFGFLA	1	16-MAR-2011	15:22:14			I8
13	ME6R1C	1	16-MAR-2011	15:27:22			I8
14	MFK7DB	1	16-MAR-2011	15:34:18	1073018	A1C140000	I8
15	MFK7DC	1	16-MAR-2011	15:41:14	1073018	A1C140000	I8
16	MEP8LR	0.98	16-MAR-2011	15:48:10	1073018	1B23459	I8
17	MEP8PR	1	16-MAR-2011	15:55:06	1073018	1B23459	I8
18	MEP8QR	0.9	16-MAR-2011	16:00:40	1073018	1B23459	I8
19	MEP80R	0.98	16-MAR-2011	16:05:41	1073018	1B23459	I8
20	MEP82R	0.96	16-MAR-2011	16:10:40	1073018	1B23459	I8
21	MEP83R	0.97	16-MAR-2011	16:15:27	1073018	1B23459	I8
22	CCV	1	16-MAR-2011	16:20:20			I8
23	CCB	1	16-MAR-2011	16:27:16			I8
24	MEP84R	1	16-MAR-2011	16:32:23	1073018	1B23459	I8
25	MEP84LR	1	16-MAR-2011	16:37:09			I8
26	MEP84S	1	16-MAR-2011	16:41:53	1060034	1B23459	I8
27	MEP84D	1	16-MAR-2011	16:48:47	1060034	1B23459	I8
28	MEP86R	0.95	16-MAR-2011	16:55:43	1073018	1B23459	I8
29	MEP88R	1	16-MAR-2011	17:02:22	1073018	1B23459	I8
30	MEP9CR	0.91	16-MAR-2011	17:07:03	1073018	1B23459	I8
31	MEP9DR	0.99	16-MAR-2011	17:12:01	1073018	1B23459	I8
32	MEP9GR	0.9	16-MAR-2011	17:17:09	1073018	1B23459	I8
33	MEP9HR	0.95	16-MAR-2011	17:21:57	1073018	1B23459	I8
34	CCV	1	16-MAR-2011	17:26:39			I8
35	CCB	1	16-MAR-2011	17:33:35			I8
36	MEP9KR	0.96	16-MAR-2011	17:38:59	1073018	1B23459	I8
37	MEP9QR	0.9	16-MAR-2011	17:43:58	1073018	1B23459	I8
38	MEP9TR	1	16-MAR-2011	17:48:42	1073018	1B23459	I8
39	MEP91R	0.96	16-MAR-2011	17:53:31	1073018	1B23459	I8
40	MEP95R	0.88	16-MAR-2011	17:58:14	1073018	1B23459	I8
41	MEP99R	0.92	16-MAR-2011	18:02:55	1073018	1B23459	I8
42	MEQAKR	0.93	16-MAR-2011	18:07:57	1073018	1B23459	I8
43	ME88GC	1	16-MAR-2011	18:12:39			I8
44	ME81V	1	16-MAR-2011	18:19:35			I8

10000ppb fe AL pds, original run on I80311A at 14:18

(continued)

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument	
45	ME750	5	16-MAR-2011	18:26:32	1066015	A1C040534	I8	2ml to 10ml
46	CCV	1	16-MAR-2011	18:31:16			I8	
47	CCB	1	16-MAR-2011	18:38:13			I8	
48	ME750X	5	16-MAR-2011	18:44:29	1066015	A1C040534	I8	2ml to 10ml
49	ME750S	5	16-MAR-2011	18:49:17	1066015	A1C040534	I8	2ml to 10ml
50	ME750F	5	16-MAR-2011	18:56:16	1066015	A1C040534	I8	2ml to 10ml
51	ME757	5	16-MAR-2011	19:01:14	1066015	A1C040534	I8	2ml to 10ml
52	ME757F	5	16-MAR-2011	19:06:01	1066015	A1C040534	I8	2ml to 10ml
53	ME76F	5	16-MAR-2011	19:10:49	1066015	A1C040534	I8	2ml to 10ml
54	ME76FF	5	16-MAR-2011	19:15:36	1066015	A1C040534	I8	2ml to 10ml
55	ME76H	5	16-MAR-2011	19:20:20	1066015	A1C040534	I8	2ml to 10ml
56	ME76HF	5	16-MAR-2011	19:25:03	1066015	A1C040534	I8	2ml to 10ml
57	ME76P	5	16-MAR-2011	19:29:45	1066015	A1C040534	I8	2ml to 10ml
58	CCV	1	16-MAR-2011	19:34:33			I8	
59	CCB	1	16-MAR-2011	19:41:31			I8	
60	ME76PF	5	16-MAR-2011	19:47:04	1066015	A1C040534	I8	2ml to 10ml
61	ME78T	1	16-MAR-2011	19:51:51	1066015	A1C040558	I8	
62	ME787	1	16-MAR-2011	19:56:44	1066015	A1C040558	I8	
63	ME79H	1	16-MAR-2011	20:01:30	1066015	A1C040562	I8	
64	ME79HL	1	16-MAR-2011	20:06:15			I8	
65	ME79HA	1	16-MAR-2011	20:11:01	1066015	A1C040562	I8	100ppb MN PDS
66	MFANRB	1	16-MAR-2011	20:18:00	1067019	A1C080000	I8	
67	MFANRC	1	16-MAR-2011	20:22:45	1067019	A1C080000	I8	
68	ME5T5	5	16-MAR-2011	20:29:43	1067019	A1C030512	I8	2ml to 10ml
69	ME5T5L	25	16-MAR-2011	20:35:20			I8	
70	CCV	1	16-MAR-2011	20:40:09			I8	
71	CCB	1	16-MAR-2011	20:47:06			I8	
72	ME5T5A	5	16-MAR-2011	20:52:18	1067019	A1C030512	I8	2ml to 10ml
73	ME5T5S	5	16-MAR-2011	20:59:15	1067019	A1C030512	I8	2ml to 10ml
74	ME5T5D	5	16-MAR-2011	21:06:13	1067019	A1C030512	I8	2ml to 10ml
75	ME5T6	5	16-MAR-2011	21:13:11	1067019	A1C030512	I8	2ml to 10ml
76	ME5T7	5	16-MAR-2011	21:18:16	1067019	A1C030512	I8	2ml to 10ml
77	ME5T8	5	16-MAR-2011	21:23:04	1067019	A1C030512	I8	2ml to 10ml
78	ME5T9	5	16-MAR-2011	21:27:49	1067019	A1C030512	I8	2ml to 10ml
79	MFANVB	1	16-MAR-2011	21:32:34	1067020	A1C080000	I8	
80	MFANVC	1	16-MAR-2011	21:37:35	1067020	A1C080000	I8	
81	ME5RH	5	16-MAR-2011	21:44:35	1067020	A1C030507	I8	2ml to 10ml
82	CCV	1	16-MAR-2011	21:49:50			I8	
83	CCB	1	16-MAR-2011	21:56:47			I8	
84	ME5RHL	25	16-MAR-2011	22:02:30			I8	
85	ME5RHA	5	16-MAR-2011	22:07:35	1067020	A1C030507	I8	2ml to 10ml
86	ME5RHS	5	16-MAR-2011	22:14:33	1067020	A1C030507	I8	2ml to 10ml
87	ME5RHD	5	16-MAR-2011	22:21:31	1067020	A1C030507	I8	2ml to 10ml
88	ME5RJ	5	16-MAR-2011	22:28:30	1067020	A1C030507	I8	2ml to 10ml

(continued)

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv **Acceptable Range:** 90% - 110%

Standard Source: **Standard ID:**

Element	WL/ Mass	True Conc	ICV 03/16/11 2:38 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	80.0	77.41	**96.8**								
Arsenic	75	80.0	79.80	**99.8**								
Barium	137	80.0	78.09	**97.6**								
Beryllium	9	80.0	76.97	**96.2**								
Cadmium	111	80.0	81.17	**101.5**								
Chromium	52	80.0	77.99	**97.5**								
Cobalt	59	80.0	81.36	**101.7**								
Copper	65	80.0	80.86	**101.1**								
Iron	56	20000.0	19756.67	**98.8**								
Lead	208	80.0	79.02	**98.8**								
Manganese	55	400.0	397.43	**99.4**								
Molybdenum	95	80.0	78.19	**97.7**								
Nickel	60	80.0	80.80	**101.0**								
Selenium	78	80.0	80.48	**100.6**								
Silver	107	80.0	83.66	**104.6**								
Thallium	205	80.0	76.44	**95.5**								
Vanadium	51	80.0	78.83	**98.5**								
Zinc	66	80.0	82.25	**102.8**								

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv **Acceptable Range:** 90% - 110%

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	True Conc	CCV 03/16/11 3:08 PM X		CCV 2 03/16/11 5:26 PM		CCV 3 03/16/11 6:31 PM		CCV 4 03/16/11 7:34 PM		CCV 5 03/16/11 8:40 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	100.0	98.50	**98.5**	96.73	**96.7**	102.07	**102.1**	104.07	**104.1**	100.18	**100.2**
Arsenic	75	100.0	100.77	**100.8**	97.06	**97.1**	99.30	**99.3**	100.08	**100.1**	95.13	**95.1**
Barium	137	100.0	99.51	**99.5**	99.18	**99.2**	103.13	**103.1**	104.43	**104.4**	99.49	**99.5**
Beryllium	9	100.0	95.74	**95.7**	97.70	**97.7**	100.18	**100.2**	101.32	**101.3**	94.06	**94.1**
Cadmium	111	100.0	103.80	**103.8**	98.14	**98.1**	101.97	**102.0**	104.97	**105.0**	102.40	**102.4**
Chromium	52	100.0	102.17	**102.2**	98.09	**98.1**	101.33	**101.3**	101.83	**101.8**	98.12	**98.1**
Cobalt	59	100.0	103.67	**103.7**	98.37	**98.4**	100.67	**100.7**	101.27	**101.3**	96.54	**96.5**
Copper	65	100.0	104.10	**104.1**	96.65	**96.7**	98.82	**98.8**	99.95	**99.9**	95.63	**95.6**
Iron	56	25000.0	25746.67	**103.0**	25133.33	**100.5**	25790.00	**103.2**	26306.67	**105.2**	25400.00	**101.6**
Lead	208	100.0	103.90	**103.9**	104.00	**104.0**	107.23	**107.2**	109.83	**109.8**	109.23	**109.2**
Manganese	55	500.0	510.57	**102.1**	496.73	**99.3**	512.27	**102.5**	522.43	**104.5**	515.20	**103.0**
Molybdenum	95	100.0	104.00	**104.0**	97.63	**97.6**	99.70	**99.7**	101.27	**101.3**	97.50	**97.5**
Nickel	60	100.0	103.63	**103.6**	97.82	**97.8**	99.12	**99.1**	99.70	**99.7**	95.40	**95.4**
Selenium	78	100.0	101.90	**101.9**	97.39	**97.4**	101.29	**101.3**	102.43	**102.4**	98.45	**98.4**
Silver	107	100.0	108.13	**108.1**	101.87	**101.9**	104.83	**104.8**	106.20	**106.2**	103.10	**103.1**
Thallium	205	100.0	95.52	**95.5**	93.33	**93.3**	96.27	**96.3**	99.29	**99.3**	98.67	**98.7**
Vanadium	51	100.0	101.13	**101.1**	97.83	**97.8**	102.30	**102.3**	102.33	**102.3**	97.72	**97.7**
Zinc	66	100.0	103.93	**103.9**	99.40	**99.4**	100.15	**100.1**	103.50	**103.5**	99.81	**99.8**

TestAmerica North Canton

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv **Acceptable Range:** 50% - 150%

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	True Conc	CRI 03/16/11 2:51 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	2.0	1.78	**89.1**								
Arsenic	75	2.0	2.01	**100.3**								
Barium	137	1.0	0.92	**92.3**								
Beryllium	9	1.0	1.00	**99.6**								
Cadmium	111	0.5	0.49	**98.4**								
Chromium	52	2.0	2.10	**104.9**								
Cobalt	59	1.0	0.99	**98.5**								
Copper	65	2.0	2.19	**109.5**								
Iron	56	50.0	58.79	**117.6**								
Lead	208	1.0	1.01	**100.9**								
Manganese	55	1.0	1.03	**103.2**								
Molybdenu	95	10.0	9.38	**93.8**								
Nickel	60	2.0	2.12	**106.1**								
Selenium	78	2.0	1.89	**94.5**								
Silver	107	0.5	0.54	**107.2**								
Thallium	205	1.0	0.89	**89.5**								
Vanadium	51	5.0	4.87	**97.3**								
Zinc	66	10.0	10.21	**102.1**								

TestAmerica North Canton

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	ICB 03/16/11 2:45 PM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	121	2	0.13	U								
Arsenic	75	5	0.4	U								
Barium	137	1	0.19	U								
Beryllium	9	1	0.2	U								
Cadmium	111	1	0.13	U								
Chromium	52	2	0.71	U								
Cobalt	59	1	0.058	U								
Copper	65	2	0.29	U								
Iron	56	50	26	U								
Lead	208	1	0.18	U								
Manganese	55	1	0.83	U								
Molybdenum	95	2	0.093	U								
Nickel	60	2	0.2	U								
Selenium	78	5	1.2	U								
Silver	107	1	0.08	U								
Thallium	205	1	0.14	U								
Vanadium	51	20	0.44	U								
Zinc	66	20	2.3	U								

U Result is less than the MDL

B Result is between MDL and RL

Form 3 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Report Limit	CCB 03/16/11 3:15 PM		CCB 2 03/16/11 5:33 PM		CCB 3 03/16/11 6:38 PM		CCB 4 03/16/11 7:41 PM		CCB 5 03/16/11 8:47 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	121	2	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
Arsenic	75	5	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Barium	137	1	0.19	U	0.19	U	0.19	U	0.19	U	0.19	U
Beryllium	9	1	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	111	1	0.13	U	0.13	U	0.13	U	0.13	U	0.13	U
Chromium	52	2	0.71	U	0.71	U	0.71	U	0.71	U	0.71	U
Cobalt	59	1	0.058	U	0.058	U	0.058	U	0.058	U	0.058	U
Copper	65	2	0.29	U	0.29	U	0.29	U	0.29	U	0.29	U
Iron	56	50	26	U	26	U	26	U	26	U	26	U
Lead	208	1	0.18	U	0.18	U	0.18	U	0.18	U	0.18	U
Manganese	55	1	0.83	U	0.83	U	0.83	U	0.83	U	0.83	U
Molybdenum	95	2	**0.27**	**B**	0.093	U	0.093	U	0.093	U	0.093	U
Nickel	60	2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Selenium	78	5	1.2	U	1.2	U	1.2	U	1.2	U	1.2	U
Silver	107	1	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
Thallium	205	1	**0.15**	**B**	0.14	U	**0.21**	**B**	**0.15**	**B**	**0.2**	**B**
Vanadium	51	20	0.44	U	0.44	U	0.44	U	0.44	U	0.44	U
Zinc	66	20	2.3	U	2.3	U	2.3	U	2.3	U	2.3	U

U Result is less than the MDL

B Result is between MDL and RL

Form 3 Equivalent

TestAmerica North Canton

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv **Acceptable Range:** 0% - 0%

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	Reporting Limit	True Conc	ICSA 03/16/11 2:56 PM Found	Found	Found	Found	Found
Antimony	121	2		0.019				
Arsenic	75	5		0.110				
Barium	137	1		0.110				
Beryllium	9	1		0.012				
Cadmium	111	1		-0.780				
Chromium	52	2		1				
Cobalt	59	1		0.040				
Copper	65	2		0.100				
Iron	56		50000	50700				
Lead	208	1		0.071				
Manganese	55	1		0.420				
Molybdenum	95	2	1000	944				
Nickel	60	2		0.420				
Selenium	78	5		0.069				
Silver	107	1		0.066				
Thallium	205	1		-0.100				
Vanadium	51	20		-0.230				
Zinc	66	20		1				

TestAmerica North Canton

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPMS **Units:** ug/L

Chart Number: I80316A.csv **Acceptable Range:** 50% - 150%

Standard Source: _____ **Standard ID:** _____

Element	WL/ Mass	True Conc	ICSAB 03/16/11 3:01 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Antimony	121	100	103.7	**103.7**								
Arsenic	75	100	103.0	**103.0**								
Barium	137	100	106.4	**106.4**								
Beryllium	9	100	101.1	**101.1**								
Cadmium	111	100	105.9	**105.9**								
Chromium	52	100	107.3	**107.3**								
Cobalt	59	100	106.0	**106.0**								
Copper	65	100	105.5	**105.5**								
Iron	56	50000	53010.0	**106.0**								
Lead	208	100	103.1	**103.1**								
Manganese	55	100	105.8	**105.8**								
Molybdenum	95	1000	1087.7	**108.8**								
Nickel	60	100	106.8	**106.8**								
Selenium	78	100	100.7	**100.7**								
Silver	107	100	112.7	**112.7**								
Thallium	205	100	98.4	**98.4**								
Vanadium	51	100	106.9	**106.9**								
Zinc	66	100	106.6	**106.6**								

N Spike recovery failed
NC Percent recovery was not calculated
U Result is less than the MDL

Form 4 Equivalent

CASE NARRATIVE

Client: TestAmerica Laboratories, Inc.

Project: MRC MD/A1C040534

Report Number: 460-23660-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 03/04/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.0 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

HEXAVALENT CHROMIUM

Samples 460-23660-1 through 460-23660-5 were analyzed for hexavalent chromium in accordance with EPA SW-846 Method 7199. The samples were analyzed on 03/04/2011.

No difficulties were encountered during the hex chrome analyses.

All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: TestAmerica Laboratories, Inc.

Job Number: 460-23660-1
Sdg Number: A1C040534

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-23660-1	MSA-SW37-030311	Water	03/03/2011 1230	03/04/2011 0945
460-23660-2	MSA-SW38-030311	Water	03/03/2011 1300	03/04/2011 0945
460-23660-3	MSA-SW39-030311	Water	03/03/2011 1350	03/04/2011 0945
460-23660-4	MSA-SW40-030311	Water	03/03/2011 1248	03/04/2011 0945
460-23660-5	MSA-SW41-030311	Water	03/03/2011 1317	03/04/2011 0945

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-23660-1

SDG No.: A1C040534

Project: MRC MD/A1C040534

Client Sample ID	Lab Sample ID
MSA-SW37-030311	460-23660-1
MSA-SW38-030311	460-23660-2
MSA-SW39-030311	460-23660-3
MSA-SW40-030311	460-23660-4
MSA-SW41-030311	460-23660-5

Comments:

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-23660-1

SDG Number: A1C040534

Matrix: Water Instrument ID: IC A

Analysis Method: 7199 MDL Date: 08/06/2010 10:12

Prep Method:

Leach Method:

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Chromium (hexavalent)		1	0.563

FORM IX - IN

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job Number: 460-23660-1

SDG Number: A1C040534

Matrix: Water Instrument ID: IC A

Analysis Method: 7199 XMDL Date: 08/06/2010 10:12

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Chromium (hexavalent)		1	0.563

FORM IX - IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Instrument ID: IC A Method: 7199

Start Date: 03/04/2011 10:05 End Date: 03/04/2011 13:54

Lab Sample ID	D/F	Type	Time	Analytes: Cr6
ZZZZZZ			10:05	
ZZZZZZ			10:12	
ZZZZZZ			10:20	
ZZZZZZ			10:27	
ZZZZZZ			10:35	
ICV 460-67276/6	1		10:42	X
ICB 460-67276/7	1		10:50	X
ZZZZZZ			10:58	
MB 460-67276/9	1	T	11:05	X
LCS 460-67276/10	1	T	11:13	X
ZZZZZZ			11:21	
460-23660-1	1	T	11:28	X
ZZZZZZ			11:36	
460-23660-2	1	T	11:44	X
ZZZZZZ			11:51	
460-23660-3	1	T	11:59	X
ZZZZZZ			12:07	
CCV 460-67276/18	1		12:14	X
CCB 460-67276/19	1		12:22	X
460-23660-4	1	T	12:30	X
ZZZZZZ			12:38	
460-23660-5	1	T	12:45	X
ZZZZZZ			12:53	
460-23660-5 DU	1	T	13:01	X
ZZZZZZ			13:08	
ZZZZZZ			13:16	
460-23660-5 MS	1	T	13:24	X
ZZZZZZ			13:31	
460-23660-5 PDS	1	T	13:39	X
CCV 460-67276/30	1		13:47	X
CCB 460-67276/31	1		13:54	X

Prep Types

T = Total/NA

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Analyst: RK Batch Start Date: 03/04/2011

Reporting Units: ug/L Analytical Batch No.: 67276

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
6	ICV	10:42	Chromium (hexavalent)	24.83	25.0	99	90-110		WThcrIM6_00283
7	ICB	10:50	Chromium (hexavalent)	1.0				U	
18	CCV	12:14	Chromium (hexavalent)	25.69	25.0	103	90-110		WThcrIM6_00283
19	CCB	12:22	Chromium (hexavalent)	1.0				U	
30	CCV	13:47	Chromium (hexavalent)	25.66	25.0	103	90-110		WThcrIM6_00283
31	CCB	13:54	Chromium (hexavalent)	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 67276	Date: 03/04/2011 11:05						
7199	MB 460-67276/9	Chromium (hexavalent)	1.0	U	ug/L	1.0	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 67276		Date: 03/04/2011 13:24									
7199	460-23660-5	Chromium (hexavalent)	1.0	U	ug/L						
7199	460-23660-5 MS	Chromium (hexavalent)	40.18		ug/L	40.0	100	85-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 67276		Date: 03/04/2011 13:39									
7199	460-23660-5	Chromium (hexavalent)	1.0	U	ug/L						
7199	460-23660-5 PDS	Chromium (hexavalent)	4.53		ug/L	5.00	91	85-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID:	67276	Date: 03/04/2011 13:01						
7199	MSA-SW41-030311	460-23660-5	Chromium (hexavalent)	1.0	ug/L			U
7199	MSA-SW41-030311	460-23660-5 DU	Chromium (hexavalent)	1.0	ug/L	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Edison Job No.: 460-23660-1

SDG No.: A1C040534

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 67276		Date: 03/04/2011 11:13									
						LCS Source: WThcrsLCS_00031					
7199	LCS 460-67276/10	Chromium (hexavalent)	23.79		ug/L	24.9	95	85-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

Case Narrative

TestAmerica West Sacramento Project Number A1C040534

General Comments
The samples were received at 0 degrees C.

WATER, 314.0, Perchlorate
Samples: 3, 5, 6
These samples were analyzed at dilutions due to matrix interferences. The reporting limits have been elevated accordingly.

There are no other anomalies associated with this project.

Perchlorate QC Check Sheet

File Name: 030911A
Chemist: JDR
Date: 3/9/2011

RL = 1, 4 ug/L

Sample ID	Criteria	True Value (ug/L)	Result	% Rec	Acceptance Criteria	Pass/Fail
Blank	baseline noise	n/a	0.0008	**n/a**	noise < 0.005	**PASS**
QCS/ICS	% Recovery	50	50.7147	101%	90% - 110%	**PASS**
ICB	< 1/2 MRL	n/a	ND	**n/a**	< 1/2 MRL	**PASS**
IPC/MCT	% Recovery	25	21.8937	88%	80% - 120%	**PASS**
	$PD_{A/H\ (ICV\ vs\ MCT)}$	n/a	12.1%	**n/a**	< 25%	**PASS**
	A/H ICV	0.2549				
	A/H MCT	0.2877				
	Retention Time Shift	n/a	0.8%	**n/a**	< 5%	**PASS**
	RT ICV	8.364				
	RT MCT	8.297				
		Original EC	**Daily EC**			
	ΔEC of IPC/MCT	4880	5040	**n/a**	< 10%	**PASS**
		RPD =	3%			
ICCS	% Recovery	4	3.782	95%	75% - 125%	**PASS**
	% Recovery	1	0.955	96%	75% - 125%	**PASS**

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A1C040534 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate		Work Order #: MFHAM1AA		MB Lot-Sample #:	G1C100000-295	
	ND	1.0	ug/L	MCAWW 314.0	03/09/11	1069295
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A1C040534 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate		Work Order #: MFHAM1AC	LCS Lot-Sample#: G1C100000-295		
	101	(85 - 115)	MCAWW 314.0	03/09/11	1069295
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A1C040534 Matrix.....: WG
Date Sampled...: 03/03/11 13:00 Date Received..: 03/04/11

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Perchlorate		WO#: ME7571CP-MS/ME7571CQ-MSD				MS Lot-Sample #: A1C040534-003	
	93	(80 - 120)			MCAWW 314.0	03/09/11	1069295
	94	(80 - 120)	1.1	(0-20)	MCAWW 314.0	03/09/11	1069295
		Dilution Factor: 2					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Sequence: 030911A
Operator: rogersj
Printed: 3/10/2011 12:39:23

Title:
Datasource: SACP205B_local
Location: ICS-2000\2011\MAR 11
Timebase: ICS-2000
#Samples: 55
Created: 3/9/2011 13:04:00 by rogersj
Last Update: 3/10/2011 12:39:18 by rogersj

No.	Name	Amount	Dil. Factor	Weight	Inj. Date/Time	Program	Type
		Perchlorate ECD_1					
1	S0	n.a.	1.0000	1.0000	3/4/2011 11:16:40	ICS-2000	Standard
2	STD1	0.982	1.0000	1.0000	3/4/2011 11:32:05	ICS-2000	Standard
3	STD2	4.050	1.0000	1.0000	3/4/2011 11:47:30	ICS-2000	Standard
4	STD3	20.244	1.0000	1.0000	3/4/2011 12:02:55	ICS-2000	Standard
5	STD4	39.983	1.0000	1.0000	3/4/2011 12:18:19	ICS-2000	Standard
6	STD5	59.485	1.0000	1.0000	3/4/2011 12:33:43	ICS-2000	Standard
7	STD6	80.016	1.0000	1.0000	3/4/2011 12:49:08	ICS-2000	Standard
8	STD7	100.242	1.0000	1.0000	3/4/2011 13:04:32	ICS-2000	Standard
9	BLANK	n.a.	1.0000	1.0000	3/9/2011 13:28:59	ICS-2000	Unknown
10	QCS/ICV 50 PPB	50.715	1.0000	1.0000	3/9/2011 13:44:24	ICS-2000	Unknown
11	ICB	n.a.	1.0000	1.0000	3/9/2011 13:59:49	ICS-2000	Unknown
12	ICCS 1 PPB	0.955	1.0000	1.0000	3/9/2011 14:15:13	ICS-2000	Unknown
13	ICCS 4 PPB	3.782	1.0000	1.0000	3/9/2011 14:30:38	ICS-2000	Unknown
14	IPC/MCT 25 PPB @ 600 PPM	21.894	1.0000	1.0000	3/9/2011 14:46:04	ICS-2000	Unknown
15	G1C040609-1	2409.453	1.0000	1.0000	3/9/2011 15:01:28	ICS-2000	Unknown
16	A1C040534-3 2X	n.a.	2.0000	1.0000	3/9/2011 15:16:52	ICS-2000	Unknown
17	A1C040534-5 2X	n.a.	2.0000	1.0000	3/9/2011 15:32:17	ICS-2000	Unknown
18	A1C040534-6 2X	n.a.	2.0000	1.0000	3/9/2011 15:47:41	ICS-2000	Unknown
19	G1C040609-1 500X	5197.375	500.0000	1.0000	3/9/2011 16:03:06	ICS-2000	Unknown
20	A1C040534-3S 2X	93.333	2.0000	1.0000	3/9/2011 16:18:31	ICS-2000	Unknown
21	A1C040534-3D 2X	94.373	2.0000	1.0000	3/9/2011 16:33:55	ICS-2000	Unknown
22	G1C040609-1 200X	4732.942	200.0000	1.0000	3/9/2011 16:49:20	ICS-2000	Unknown
23	G1C040609-1S 200X	14399.295	200.0000	1.0000	3/9/2011 17:04:44	ICS-2000	Unknown
24	G1C040609-1D 200X	14601.598	200.0000	1.0000	3/9/2011 17:20:09	ICS-2000	Unknown
25	CCV 100 PPB	103.471	1.0000	1.0000	3/9/2011 17:35:33	ICS-2000	Unknown
26	CCB	n.a.	1.0000	1.0000	3/9/2011 17:50:58	ICS-2000	Unknown
27	MB-1	n a.	1.0000	0.1000	3/9/2011 18:06:22	ICS-2000	Unknown
28	LCS-1	504.027	1.0000	0.1000	3/9/2011 18:21:46	ICS-2000	Unknown
29	G1C030551-1	108.538	1.0000	0.0998	3/9/2011 18:37:11	ICS-2000	Unknown
30	G1C030551-2	2749.113	1.0000	0.1003	3/9/2011 18:52:35	ICS-2000	Unknown
31	G1C030551-3	1171.777	1.0000	0.0995	3/9/2011 19:08:00	ICS-2000	Unknown
32	G1C030551-4	148.141	1.0000	0.1020	3/9/2011 19:23:24	ICS-2000	Unknown
33	G1C030551-5	80.617	1.0000	0.1003	3/9/2011 19:38:49	ICS-2000	Unknown
34	G1C030551-6	4053.233	1.0000	0.1000	3/9/2011 19:54:14	ICS-2000	Unknown
35	G1C030551-7	3023.701	1.0000	0.0988	3/9/2011 20:09:39	ICS-2000	Unknown
36	G1C030551-8	1376.068	1.0000	0.0990	3/9/2011 20:25:03	ICS-2000	Unknown
37	CCV 60 PPB	62.366	1.0000	1.0000	3/9/2011 20:40:28	ICS-2000	Unknown
38	CCB	n.a.	1.0000	1.0000	3/9/2011 20:55:52	ICS-2000	Unknown
39	G1C030551-9	148.544	1.0000	0.1010	3/9/2011 21:11:16	ICS-2000	Unknown
40	G1C030551-10	474.492	1.0000	0.1008	3/9/2011 21:26:41	ICS-2000	Unknown

Title:
Datasource: SACP205B_local
Location: ICS-2000\2011\MAR 11
Timebase: ICS-2000
#Samples. 55
Created: 3/9/2011 13:04:00 by rogersj
Last Update: 3/10/2011 12:39:18 by rogersj

No.	Name	Method	Status	Inj. Vol.	Comment
1	S0	perchlorate	Finished	1000.0	
2	STD1	perchlorate	Finished	1000.0	
3	STD2	perchlorate	Finished	1000.0	
4	STD3	perchlorate	Finished	1000.0	
5	STD4	perchlorate	Finished	1000.0	
6	STD5	perchlorate	Finished	1000.0	
7	STD6	perchlorate	Finished	1000.0	
8	STD7	perchlorate	Finished	1000.0	
9	BLANK	perchlorate	Finished	1000.0	
10	QCS/ICV 50 PPB	perchlorate	Finished	1000.0	
11	ICB	perchlorate	Finished	1000.0	
12	ICCS 1 PPB	perchlorate	Finished	1000.0	
13	ICCS 4 PPB	perchlorate	Finished	1000.0	
14	IPC/MCT 25 PPB @ 600 PPM	perchlorate	Finished	1000.0	
15	G1C040609-1	perchlorate	Finished	1000.0	
16	A1C040534-3 2X	perchlorate	Finished	1000.0	
17	A1C040534-5 2X	perchlorate	Finished	1000.0	
18	A1C040534-6 2X	perchlorate	Finished	1000.0	
19	G1C040609-1 500X	perchlorate	Finished	1000.0	
20	A1C040534-3S 2X	perchlorate	Finished	1000.0	
21	A1C040534-3D 2X	perchlorate	Finished	1000.0	
22	G1C040609-1 200X	perchlorate	Finished	1000.0	
23	G1C040609-1S 200X	perchlorate	Finished	1000.0	
24	G1C040609-1D 200X	perchlorate	Finished	1000.0	
25	CCV 100 PPB	perchlorate	Finished	1000 0	
26	CCB	perchlorate	Finished	1000 0	
27	MB-1	perchlorate	Finished	1000.0	
28	LCS-1	perchlorate	Finished	1000.0	
29	G1C030551-1	perchlorate	Finished	1000.0	
30	G1C030551-2	perchlorate	Finished	1000.0	
31	G1C030551-3	perchlorate	Finished	1000.0	
32	G1C030551-4	perchlorate	Finished	1000.0	
33	G1C030551-5	perchlorate	Finished	1000.0	
34	G1C030551-6	perchlorate	Finished	1000.0	
35	G1C030551-7	perchlorate	Finished	1000.0	
36	G1C030551-8	perchlorate	Finished	1000.0	
37	CCV 60 PPB	perchlorate	Finished	1000.0	
38	CCB	perchlorate	Finished	1000.0	
39	G1C030551-9	perchlorate	Finished	1000.0	
40	G1C030551-10	perchlorate	Finished	1000.0	

Title:
Datasource: SACP205B_local
Location: ICS-2000\2011\MAR 11
Timebase: ICS-2000
#Samples: 55
Created: 3/9/2011 13:04:00 by rogersj
Last Update: 3/10/2011 12:39:18 by rogersj

No.	Name	Amount	Dil. Factor	Weight	Inj. Date/Time	Program	Type
		Perchlorate ECD_1					
41	G1C030551-11	4490.908	1.0000	0.0993	3/9/2011 21:42:05	ICS-2000	Unknown
42	G1C030551-12	276.862	1.0000	0.1000	3/9/2011 21:57:30	ICS-2000	Unknown
43	G1C030551-13	157.118	1.0000	0.0990	3/9/2011 22:12:54	ICS-2000	Unknown
44	G1C030551-14	518.466	1.0000	0.1005	3/9/2011 22:28:19	ICS-2000	Unknown
45	G1C030551-15	4275.162	1.0000	0.0995	3/9/2011 22:43:43	ICS-2000	Unknown
46	G1C030551-16	111.181	1.0000	0.1000	3/9/2011 22:59:08	ICS-2000	Unknown
47	G1C030551-17	515.148	1.0000	0.1015	3/9/2011 23:14:32	ICS-2000	Unknown
48	G1C030551-18	271.303	1.0000	0.1005	3/9/2011 23:29:57	ICS-2000	Unknown
49	CCV 100 PPB	107.040	1.0000	1.0000	3/9/2011 23:45:21	ICS-2000	Unknown
50	CCB	n.a.	1.0000	1.0000	3/10/2011 00:00:46	ICS-2000	Unknown
51	G1C030551-19	734.037	1.0000	0.0995	3/10/2011 00:16:10	ICS-2000	Unknown
52	G1C030551-20	3384.258	1.0000	0.1005	3/10/2011 00:31:35	ICS-2000	Unknown
53	CCV 60 PPB	62.760	1.0000	1.0000	3/10/2011 00:46:59	ICS-2000	Unknown
54	CCB	n.a.	1.0000	1.0000	3/10/2011 01:02:24	ICS-2000	Unknown
55	SHUTDOWN	n.a.	1.0000	1.0000	3/10/2011 01:17:48	SHUTDOWN	Unknown

Title:
Datasource: SACP205B_local
Location: ICS-2000\2011\MAR 11
Timebase: ICS-2000
#Samples: 55
Created: 3/9/2011 13:04:00 by rogersj
Last Update: 3/10/2011 12:39:18 by rogersj

No.	Name	Method	Status	Inj. Vol.	Comment
41	G1C030551-11	perchlorate	Finished	1000.0	
42	G1C030551-12	perchlorate	Finished	1000.0	
43	G1C030551-13	perchlorate	Finished	1000.0	
44	G1C030551-14	perchlorate	Finished	1000.0	
45	G1C030551-15	perchlorate	Finished	1000.0	
46	G1C030551-16	perchlorate	Finished	1000.0	
47	G1C030551-17	perchlorate	Finished	1000.0	
48	G1C030551-18	perchlorate	Finished	1000.0	
49	CCV 100 PPB	perchlorate	Finished	1000.0	
50	CCB	perchlorate	Finished	1000.0	
51	G1C030551-19	perchlorate	Finished	1000.0	
52	G1C030551-20	perchlorate	Finished	1000.0	
53	CCV 60 PPB	perchlorate	Finished	1000.0	
54	CCB	perchlorate	Finished	1000.0	
55	SHUTDOWN	perchlorate	Finished	1000.0	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **D. MURALI** **DATE:** **APRIL 4, 2011**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- VOC/PAH**
FROG MORTAR CREEK
SDG A1C040534

SAMPLES: 4/Aqueous/VOC/PAH

MSA-SW38-030311 MSA-SW40-030311 MSA-SW41-030311
TB-030311

Overview

The sample set for Frog Mortar Creek, SDG A1C040534 consists of three (3) aqueous environmental samples and one (1) trip blank. All samples were analyzed for volatile organic compounds (VOC) and polynuclear aromatic hydrocarbons (PAHs) and 1,4-dioxane. The trip blank was analyzed for VOCs only.

The samples were collected by Tetra Tech on March 3, 2011 and analyzed by Test America (North Canton). All analyses were conducted in accordance with SW-846 Methods 8260B and 8270C analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major

- All VOC initial calibration and continuing calibration relative response factors (RRFs) were less than the 0.05 quality control limit for tert-butyl alcohol. The non-detected results reported for tert-butyl alcohol were rejected (UR).

Minor

- The following compound was detected in the trip blank at the maximum concentration indicated below:

Compound	Concentration	Action Level
Acetone	1.5 ug/L	15 ug/L

An action level of 10X the maximum contaminant concentration was established for acetone to evaluate laboratory contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. The positive result for acetone below the blank action level was qualified (B) as a result of blank contamination in sample MSA-SW41-030311.

- Positive results less than the reporting limit (RL) were qualified as estimated, (J), due to uncertainty near the detection limit.

Notes

The VOC continuing calibration % Ds were greater than the quality control limit of 20% but less than 50% for dichlorodifluoromethane, chloromethane, bromomethane, chloroethane, trichlorofluoromethane, 1,1,2- and trichlorotrifluoroethanefor instrument a3ux15 on 3/11/11 @ 10:28. All of the aforementioned compounds were non-detected; therefore, no data qualification was necessary.

Sample MSA-SW38-030311 required a 4 times dilution because of concentrations greater than the linear calibration range of the instrument for cis-1,2-dichloroethene and vinyl chloride. The laboratory only submitted one run for sample MSA-SW38-030311 so this accounts for the elevated detection limits for the nondetected compounds.

Results were reported to the method detection limit (MDL).

Executive Summary

Laboratory Performance: The VOC compound tert-butyl alcohol was rejected in all samples due to a poor response factor. Blank contamination for the VOC fraction resulted in the qualification of data.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$ / ICP PDS Recovery Noncompliance
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

Appendix B

Results as Reported by the Laboratory

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-003 **Work Order #...:** ME7571AA **Matrix.....:** WG
Date Sampled...: 03/03/11 13:00 **Date Received..:** 03/04/11
Prep Date.....: 03/11/11 **Analysis Date..:** 03/11/11
Prep Batch #...: 1073129
Dilution Factor: 4 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	20	ug/L
Bromobenzene	ND	4.0	ug/L
Bromochloromethane	ND	4.0	ug/L
Bromodichloromethane	ND	4.0	ug/L
2-Butanone	ND	20	ug/L
n-Butylbenzene	ND	4.0	ug/L
sec-Butylbenzene	ND	4.0	ug/L
tert-Butylbenzene	ND	4.0	ug/L
Carbon disulfide	ND	4.0	ug/L
Dibromochloromethane	ND	4.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	8.0	ug/L
2-Chloroethyl vinyl ether	ND	20	ug/L
2-Chlorotoluene	ND	4.0	ug/L
4-Chlorotoluene	ND	4.0	ug/L
1,2-Dibromoethane	ND	4.0	ug/L
Dibromomethane	ND	4.0	ug/L
1,2-Dichlorobenzene	ND	4.0	ug/L
1,3-Dichlorobenzene	ND	4.0	ug/L
1,4-Dichlorobenzene	**3.9 J**	**4.0**	**ug/L**
Dichlorodifluoromethane	ND	4.0	ug/L
cis-1,2-Dichloroethene	**130**	**4.0**	**ug/L**
trans-1,2-Dichloroethene	**0.87 J**	**4.0**	**ug/L**
1,3-Dichloropropane	ND	4.0	ug/L
2,2-Dichloropropane	ND	4.0	ug/L
1,1-Dichloropropene	ND	4.0	ug/L
Trichlorofluoromethane	ND	4.0	ug/L
Hexachlorobutadiene	ND	4.0	ug/L
2-Hexanone	ND	20	ug/L
Isopropylbenzene	ND	4.0	ug/L
p-Isopropyltoluene	ND	4.0	ug/L
tert-Butyl alcohol	ND	80	ug/L
4-Methyl-2-pentanone	ND	20	ug/L
Naphthalene	ND	4.0	ug/L
n-Propylbenzene	ND	4.0	ug/L
Styrene	ND	4.0	ug/L
1,1,1,2-Tetrachloroethane	ND	4.0	ug/L
1,2,3-Trichlorobenzene	ND	4.0	ug/L

(Continued on next page)

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-003 **Work Order #...:** ME7571AA **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2,4-Trichloro-benzene	**1.2 J**	**4.0**	**ug/L**
1,2,3-Trichloropropane	ND	4.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	4.0	ug/L
1,2,4-Trimethylbenzene	ND	4.0	ug/L
Vinyl acetate	ND	8.0	ug/L
o-Xylene	**2.8 J**	**4.0**	**ug/L**
Xylenes (total)	**16**	**8.0**	**ug/L**
Methyl tert-butyl ether	ND	20	ug/L
m-Xylene & p-Xylene	**14**	**8.0**	**ug/L**
1,2,3-Trimethylbenzene	ND	20	ug/L
Diisopropyl Ether (DIPE)	ND	20	ug/L
Ethyl-t-Butyl Ether (ETBE)	ND	20	ug/L
Tert-amyl methyl ether (TAME)	ND	20	ug/L
Benzene	ND	4.0	ug/L
Bromoform	ND	4.0	ug/L
Bromomethane	ND	4.0	ug/L
Carbon tetrachloride	ND	4.0	ug/L
Chlorobenzene	ND	4.0	ug/L
Chloroethane	ND	4.0	ug/L
Chloroform	ND	4.0	ug/L
Chloromethane	ND	4.0	ug/L
1,1-Dichloroethane	ND	4.0	ug/L
1,2-Dichloroethane	ND	4.0	ug/L
1,1-Dichloroethene	**1.4 J**	**4.0**	**ug/L**
1,2-Dichloropropane	ND	4.0	ug/L
cis-1,3-Dichloropropene	ND	4.0	ug/L
trans-1,3-Dichloropropene	ND	4.0	ug/L
Ethylbenzene	**1.9 J**	**4.0**	**ug/L**
Methylene chloride	ND	4.0	ug/L
1,1,2,2-Tetrachloroethane	ND	4.0	ug/L
Tetrachloroethene	ND	4.0	ug/L
Toluene	**1.4 J**	**4.0**	**ug/L**
1,1,1-Trichloroethane	ND	4.0	ug/L
Trichloroethene	**32**	**4.0**	**ug/L**
Vinyl chloride	**140**	**4.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	102	(75 - 121)
1,2-Dichloroethane-d4	110	(63 - 129)
Toluene-d8	107	(74 - 115)
4-Bromofluorobenzene	107	(66 - 117)

NOTE(S):

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-005 **Work Order #...:** ME76H1AM **Matrix.....:** WG
Date Sampled...: 03/03/11 12:48 **Date Received..:** 03/04/11
Prep Date.....: 03/11/11 **Analysis Date..:** 03/11/11
Prep Batch #...: 1073129
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	ND	5.0	ug/L
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**5.5**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
tert-Butyl alcohol	ND	20	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-005 **Work Order #...:** ME76H1AM **Matrix.....:** WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2,3-Trimethylbenzene	ND	5.0	ug/L
Diisopropyl Ether (DIPE)	ND	5.0	ug/L
Ethyl-t-Butyl Ether (ETBE)	ND	5.0	ug/L
Tert-amyl methyl ether (TAME)	ND	5.0	ug/L
Benzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**4.2**	**1.0**	**ug/L**
Vinyl chloride	**1.8**	**1.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(75 - 121)
1,2-Dichloroethane-d4	107	(63 - 129)
Toluene-d8	107	(74 - 115)
4-Bromofluorobenzene	105	(66 - 117)

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

GC/MS Volatiles

Lot-Sample #...:	A1C040534-006	**Work Order #...:**	ME76P1AM	**Matrix.....:**	WG
Date Sampled...:	03/03/11 13:17	**Date Received..:**	03/04/11		
Prep Date.....:	03/11/11	**Analysis Date..:**	03/11/11		
Prep Batch #...:	1073129				
Dilution Factor:	1	**Initial Wgt/Vol:**	5 mL	**Final Wgt/Vol..:**	5 mL
		Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**5.7**	**5.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	**0.38 J**	**1.0**	**ug/L**
Dichlorodifluoromethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	**21**	**1.0**	**ug/L**
trans-1,2-Dichloroethene	**0.20 J**	**1.0**	**ug/L**
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
tert-Butyl alcohol	ND	20	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L

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Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-006 Work Order #...: ME76P1AM Matrix.....: WG

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
o-Xylene	**0.29 J**	**1.0**	**ug/L**
Xylenes (total)	**1.9 J**	**2.0**	**ug/L**
Methyl tert-butyl ether	ND	5.0	ug/L
m-Xylene & p-Xylene	**1.6 J**	**2.0**	**ug/L**
1,2,3-Trimethylbenzene	ND	5.0	ug/L
Diisopropyl Ether (DIPE)	ND	5.0	ug/L
Ethyl-t-Butyl Ether (ETBE)	ND	5.0	ug/L
Tert-amyl methyl ether (TAME)	ND	5.0	ug/L
Benzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	**0.21 J**	**1.0**	**ug/L**
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	**0.23 J**	**1.0**	**ug/L**
Methylene chloride	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Trichloroethene	**24**	**1.0**	**ug/L**
Vinyl chloride	**8.7**	**1.0**	**ug/L**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(75 - 121)
1,2-Dichloroethane-d4	112	(63 - 129)
Toluene-d8	106	(74 - 115)
4-Bromofluorobenzene	105	(66 - 117)

NOTE(S):

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: TB-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-001 **Work Order #...:** ME75M1AA **Matrix.....:** WQ
Date Sampled...: 03/03/11 10:00 **Date Received..:** 03/04/11
Prep Date.....: 03/11/11 **Analysis Date..:** 03/11/11
Prep Batch #...: 1073129
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL **Final Wgt/Vol..:** 5 mL
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acetone	**1.5 J**	**5.0**	**ug/L**
Bromobenzene	ND	1.0	ug/L
Bromochloromethane	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
n-Butylbenzene	ND	1.0	ug/L
sec-Butylbenzene	ND	1.0	ug/L
tert-Butylbenzene	ND	1.0	ug/L
Carbon disulfide	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L
2-Chloroethyl vinyl ether	ND	5.0	ug/L
2-Chlorotoluene	ND	1.0	ug/L
4-Chlorotoluene	ND	1.0	ug/L
1,2-Dibromoethane	ND	1.0	ug/L
Dibromomethane	ND	1.0	ug/L
1,2-Dichlorobenzene	ND	1.0	ug/L
1,3-Dichlorobenzene	ND	1.0	ug/L
1,4-Dichlorobenzene	ND	1.0	ug/L
Dichlorodifluoromethane	ND	1.0	ug/L
cis-1,2-Dichloroethene	ND	1.0	ug/L
trans-1,2-Dichloroethene	ND	1.0	ug/L
1,3-Dichloropropane	ND	1.0	ug/L
2,2-Dichloropropane	ND	1.0	ug/L
1,1-Dichloropropene	ND	1.0	ug/L
Trichlorofluoromethane	ND	1.0	ug/L
Hexachlorobutadiene	ND	1.0	ug/L
2-Hexanone	ND	5.0	ug/L
Isopropylbenzene	ND	1.0	ug/L
p-Isopropyltoluene	ND	1.0	ug/L
tert-Butyl alcohol	ND	20	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
Naphthalene	ND	1.0	ug/L
n-Propylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L
1,2,3-Trichlorobenzene	ND	1.0	ug/L

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Tetra Tech NUS, Inc

Client Sample ID: TB-030311

GC/MS Volatiles

Lot-Sample #...: A1C040534-001 **Work Order #...:** ME75M1AA **Matrix.....:** WQ

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,2,4-Trichloro-benzene	ND	1.0	ug/L
1,2,3-Trichloropropane	ND	1.0	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L
1,2,4-Trimethylbenzene	ND	1.0	ug/L
Vinyl acetate	ND	2.0	ug/L
o-Xylene	ND	1.0	ug/L
Xylenes (total)	ND	2.0	ug/L
Methyl tert-butyl ether	ND	5.0	ug/L
m-Xylene & p-Xylene	ND	2.0	ug/L
1,2,3-Trimethylbenzene	ND	5.0	ug/L
Diisopropyl Ether (DIPE)	ND	5.0	ug/L
Ethyl-t-Butyl Ether (ETBE)	ND	5.0	ug/L
Tert-amyl methyl ether (TAME)	ND	5.0	ug/L
Benzene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
Bromomethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Chloroethane	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
Chloromethane	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Methylene chloride	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Vinyl chloride	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(75 - 121)
1,2-Dichloroethane-d4	110	(63 - 129)
Toluene-d8	113	(74 - 115)
4-Bromofluorobenzene	107	(66 - 117)

NOTE(S):

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW38-030311

GC/MS Semivolatiles

Lot-Sample #...: A1C040534-003	**Work Order #...:** ME7571AC	**Matrix.....:** WG	
Date Sampled...: 03/03/11 13:00	**Date Received..:** 03/04/11		
Prep Date.....: 03/05/11	**Analysis Date..:** 03/10/11		
Prep Batch #...: 1063310			
Dilution Factor: 1	**Initial Wgt/Vol:** 1050 mL	**Final Wgt/Vol..:** 2 mL	
	Method.....: SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,4-Dioxane	**2.6**	**1.0**	**ug/L**
Acenaphthene	ND	0.20	ug/L
Acenaphthylene	ND	0.20	ug/L
Anthracene	ND	0.20	ug/L
Benzo(a)anthracene	ND	0.20	ug/L
Benzo(a)pyrene	ND	0.20	ug/L
Benzo(b)fluoranthene	ND	0.20	ug/L
Benzo(ghi)perylene	ND	0.20	ug/L
Benzo(k)fluoranthene	ND	0.20	ug/L
Chrysene	ND	0.20	ug/L
Dibenzo(a,h)anthracene	ND	0.20	ug/L
Fluoranthene	ND	0.20	ug/L
Fluorene	ND	0.20	ug/L
Indeno(1,2,3-cd)pyrene	ND	0.20	ug/L
Naphthalene	ND	0.20	ug/L
Phenanthrene	ND	0.20	ug/L
Pyrene	ND	0.20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	53	(27 - 111)
2-Fluorobiphenyl	51	(28 - 110)
Terphenyl-d14	69	(37 - 119)

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW40-030311

GC/MS Semivolatiles

Lot-Sample #...:	A1C040534-005	**Work Order #...:**	ME76H1AN	**Matrix.....:**	WG
Date Sampled...:	03/03/11 12:48	**Date Received..:**	03/04/11		
Prep Date.....:	03/05/11	**Analysis Date..:**	03/10/11		
Prep Batch #...:	1063310				
Dilution Factor:	1	**Initial Wgt/Vol:**	960 mL	**Final Wgt/Vol..:**	2 mL
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,4-Dioxane	**0.49 J**	**1.0**	**ug/L**
Acenaphthene	ND	0.20	ug/L
Acenaphthylene	ND	0.20	ug/L
Anthracene	ND	0.20	ug/L
Benzo(a)anthracene	ND	0.20	ug/L
Benzo(a)pyrene	ND	0.20	ug/L
Benzo(b)fluoranthene	ND	0.20	ug/L
Benzo(ghi)perylene	ND	0.20	ug/L
Benzo(k)fluoranthene	ND	0.20	ug/L
Chrysene	ND	0.20	ug/L
Dibenzo(a,h)anthracene	ND	0.20	ug/L
Fluoranthene	ND	0.20	ug/L
Fluorene	ND	0.20	ug/L
Indeno(1,2,3-cd)pyrene	ND	0.20	ug/L
Naphthalene	ND	0.20	ug/L
Phenanthrene	ND	0.20	ug/L
Pyrene	ND	0.20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	50	(27 - 111)
2-Fluorobiphenyl	50	(28 - 110)
Terphenyl-d14	50	(37 - 119)

NOTE(S):

J Estimated result. Result is less than RL.

Tetra Tech NUS, Inc

Client Sample ID: MSA-SW41-030311

GC/MS Semivolatiles

Lot-Sample #...:	A1C040534-006	**Work Order #...:**	ME76P1AN	**Matrix.....:**	WG
Date Sampled...:	03/03/11 13:17	**Date Received..:**	03/04/11		
Prep Date.....:	03/05/11	**Analysis Date..:**	03/10/11		
Prep Batch #...:	1063310				
Dilution Factor:	1	**Initial Wgt/Vol:**	1050 mL	**Final Wgt/Vol..:**	2 mL
		Method.....:	SW846 8270C		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
1,4-Dioxane	ND	1.0	ug/L
Acenaphthene	ND	0.20	ug/L
Acenaphthylene	ND	0.20	ug/L
Anthracene	ND	0.20	ug/L
Benzo(a)anthracene	ND	0.20	ug/L
Benzo(a)pyrene	ND	0.20	ug/L
Benzo(b)fluoranthene	ND	0.20	ug/L
Benzo(ghi)perylene	ND	0.20	ug/L
Benzo(k)fluoranthene	ND	0.20	ug/L
Chrysene	ND	0.20	ug/L
Dibenzo(a,h)anthracene	ND	0.20	ug/L
Fluoranthene	ND	0.20	ug/L
Fluorene	ND	0.20	ug/L
Indeno(1,2,3-cd)pyrene	ND	0.20	ug/L
Naphthalene	ND	0.20	ug/L
Phenanthrene	ND	0.20	ug/L
Pyrene	ND	0.20	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	49	(27 - 111)
2-Fluorobiphenyl	50	(28 - 110)
Terphenyl-d14	65	(37 - 119)

Appendix C

Support Documentation

SDG A1C040534

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HG	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
M	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
M	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
HGF	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6
HGF	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/09/2011	4	2	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-SW39-030311	A1C040534004	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW37-030311	A1C040534002	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
MF	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/07/2011	03/16/2011	4	9	13
CR6	UG/L	MSA-SW38-030311	460-23660-2	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW39-030311	460-23660-3	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW37-030311	460-23660-1	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW40-030311	460-23660-4	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
CR6	UG/L	MSA-SW41-030311	460-23660-5	NM	03/03/2011	03/04/2011	03/04/2011	1	0	1
PCL	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/09/2011	03/09/2011	6	0	6
PCL	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/09/2011	03/09/2011	6	0	6
PCL	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/09/2011	03/09/2011	6	0	6
OV	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	TB-030311	A1C040534001	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	TB-030311	A1C040534001	TB	03/03/2011	03/11/2011	03/11/2011	8	0	8
OV	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/11/2011	03/11/2011	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	MSA-SW38-030311	A1C040534003	NM	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW38-030311	A1C040534003	SUR	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW40-030311	A1C040534005	NM	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW40-030311	A1C040534005	SUR	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW41-030311	A1C040534006	NM	03/03/2011	03/05/2011	03/10/2011	2	5	7
SIM	UG/L	MSA-SW41-030311	A1C040534006	SUR	03/03/2011	03/05/2011	03/10/2011	2	5	7

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

PROJECT NO. 112IC03292

MSA SURFACE WATER SAMPLING

Lot #: A1C040534

Tony Apanavage

Tetra Tech NUS Inc
20251 Century Blvd
Suite 200
Germantown, MD 20874

TESTAMERICA LABORATORIES, INC.

Patrick O'Meara

Approved for release.
Patrick O'Meara
Project Manager
3/22/2011 5:55 PM

Patrick J. O'Meara
Project Manager
patrick.omeara@testamericainc.com

March 22, 2011

ACCREDITED IN ACCORDANCE WITH nelac

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CASE NARRATIVE

A1C040534

The following report contains the analytical results for five water samples and one quality control sample submitted to TestAmerica North Canton by Tetra Tech NUS, Inc from the MSA SURFACE WATER SAMPLING Site, project number 112IC03292. The samples were received March 04, 2011, according to documented sample acceptance procedures.

The 314.0 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory. Refer to the TestAmerica West Sacramento narrative included in their data package for additional information.

The 7199 Hexavalent Chromium analysis was performed at the TestAmerica Edison Laboratory. Refer to the TestAmerica Edison narrative included in their data package for additional information.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Kelly Carper and Tony Apanavage on March 17, 2011. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

CASE NARRATIVE (continued)

If you have any questions, please call the Project Manager, Patrick J. O'Meara, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.6°C.

GC/MS VOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

2-Chloroethyl vinyl ether cannot be reliably recovered in an acid preserved sample.

GC/MS SEMIVOLATILES

The sample(s) that contain results between the MDL and the RL were flagged with "J". There is a possibility of false positive or mis-identification at these quantitation levels. In analytical methods requiring confirmation of the analyte reported, confirmation was performed only down to the standard reporting limit (SRL). The acceptance criteria for QC samples may not be met at these quantitation levels.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive or mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) had elevated reporting limits due to matrix interferences. Refer to the sample report pages for the affected analyte(s) flagged with "G".

CASE NARRATIVE (continued)

METALS (cont)

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

No ICP MS Form IX provided for batch(es) 1066015. The serial dilution was performed on a different sample from the same QC batch(es).

GENERAL CHEMISTRY

The sample(s) had elevated reporting limits due to matrix interferences. Refer to the sample report pages for the affected analyte(s) flagged with "G".

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called Quality Control Batches (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a Method Blank (MB), a Laboratory Control Sample (LCS) and, a Matrix Spike/Matrix Spike Duplicate (MS/MSD) pair or a Matrix Spike/Sample Duplicate (MS/DU) pair.
For 600 series/CWA methods, QC samples include a Method Blank (MB), a Laboratory Control Sample (LCS) and, where appropriate, a Matrix Spike (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch, with the exception of poor performing analytes. A list of these analytes is listed below. No corrective action is taken if these analytes do not meet criteria.Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

Poor performers

Method 8270 Water and Solid:	
4-Nitrophenol	3,3' – Dichlorobenzidine
Benzoic Acid	2,4,6 - Tribromophenol
Phenol	2,4-Dinitrophenol
Phenol-d5	Pentachlorophenol
4,6-Dinitro-2-methylphenol	Hexachlorocyclopentadiene (LCG only)
Benzyl Alcohol	4-Chloroaniline
Method 8151 Solid	
Dinoseb	
Method 8260 Water and Solid	
Dichlorodifluoromethane	Hexachlorobutadiene
Trichlorofluoromethane	Naphthalene
Chloroethane	1,2,3-Trichlorobenzene
Acetone	1,2,4-Trichlorobenzene
Bromomethane	2,2-Dichloropropane
Bromoform	Chloromethane

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be ten fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results do not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate or Matrix Spike/Sample Duplicate.

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater. For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.
California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),

Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190), DoD ELAP (ADE-1437) USDA Soil Permit (P33-08-00123)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

EXECUTIVE SUMMARY

ANALYTICAL METHODS SUMMARY

A1C040534

PARAMETER	ANALYTICAL METHOD
ICP-MS (6020)	SW846 6020
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Perchlorate	MCAWW 314.0
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE SUMMARY

SAMPLE SUMMARY

A1C040534

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ME75M	001	TB-030311	03/03/11	10:00
ME750	002	MSA-SW37-030311	03/03/11	12:30
ME757	003	MSA-SW38-030311	03/03/11	13:00
ME76F	004	MSA-SW39-030311	03/03/11	13:50
ME76H	005	MSA-SW40-030311	03/03/11	12:48
ME76P	006	MSA-SW41-030311	03/03/11	13:17

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

SHIPPING AND RECEIVING DOCUMENTS

North Canton

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

18

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: Tetra Tech	Tony Apacsvage	Stu Cameron	Pat O'Meara	010579
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5552	Telephone: (708) 342-8389	Telephone: (330) 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apacsvage@Tetratech.com			
Phone: [redacted] (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	Analyses	
Project Name: MSA Surface Water Sampling	Method of Shipment/Carrier:			
Project Number: 112I03292 Task-02	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Volume Collected	Container Code	VOCs	PAHs + 1,4-Dioxane	Perchlorate	Total PPM	Dissolved PPM	Sample Specific Notes / Special Instructions:
TB-030311	3/3/11	1000		X					[redacted]	2						G	X			[redacted]		
MSA-SW37-030311	↓	1230		X					2							G				X	X	
MSA-SW38-030311		1300		X					2	3			3			G	X	X	X	X	X	
MSA-SW39-030311		1350		X					2							G				X	X	
MSA-SW40-030311		1248		X					2	3			3			G	X	X	X	X	X	
MSA-SW41-030311	↓	1317		X					2	3			3			G	X	X	X	X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	3/3/11 - 1600			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	TMZ	3/4/11 920

TAL 0018-1 (04/10)

North Canton

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 440534
North Canton Facility

Client Tetra Tech Project _____ By: _____ (Signature)
Cooler Received on 3-4-11 Opened on 3-4-11
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☒ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 1.6 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☒ No ☐ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 100110-HNO_3; *Sulfuric Acid Lot#* 110410-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN$/*NaOH*. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
37	LL LL	3/4/11	CSL
38	LL LL	"	"
39	LL LL	"	"
40	LL LL	"	"
41	LL LL	"	"

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

GCMS VOLATILE DATA

SW846 8260B SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No:

Lot #: A1C040534

Extraction: XXI25QK01

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	TOT OUT
01	TB-030311	103	110	113	107	00
02	MSA-SW38-030311	102	110	107	107	00
03	MSA-SW40-030311	95	107	107	105	00
04	MSA-SW41-030311	104	112	106	105	00
05	INTRA-LAB QC	102	108	111	107	00
06	METHOD BLK. MFLD51AA	101	108	111	108	00
07	LCS MFLD51AC	109	107	109	113	00
08	LAB MS/MSD D	109	112	111	114	00
09	LAB MS/MSD S	108	111	109	112	00

SURROGATES		QC LIMITS
SRG01	= Dibromofluoromethane	(75-121)
SRG02	= 1,2-Dichloroethane-d4	(63-129)
SRG03	= Toluene-d8	(74-115)
SRG04	= 4-Bromofluorobenzene	(66-117)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID: BFB603 BFB Injection Date: 03/10/11

Instrument ID: A3UX15 BFB Injection Time: 1041

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	29.5
75	30.0 - 60.0% of mass 95	52.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.7 (0.8)1
174	50.0 - 100.0% of mass 95	90.6
175	5.0 - 9.0% of mass 174	6.0 (6.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.0 (96.0)1
177	5.0 - 9.0% of mass 176	5.4 (6.3)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD001	5NG-IC	UXC4096	03/10/11	1253
02	VSTD002	10NG-IC	UXC4097	03/10/11	1316
03	VSTD005	25NG-IC	UXC4098	03/10/11	1339
04	VSTD010	50NG-IC	UXC4099	03/10/11	1401
05	VSTD020	100NG-IC	UXC4100	03/10/11	1423
06	VSTD040	200NG-IC	UXC4101	03/10/11	1445
07	VSTD001	5NG-IC	UXC4102	03/10/11	1507
08	VSTD002	10NG-IC	UXC4103	03/10/11	1530
09	VSTD005	25NG-IC	UXC4104	03/10/11	1552
10	VSTD010	50NG-IC	UXC4105	03/10/11	1614
11	VSTD020	100NG-IC	UXC4106	03/10/11	1636
12	VSTD040	200NG-IC	UXC4107	03/10/11	1658
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20					
21					
22					

Report Date : 11-Mar-2011 08:53

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAY-2010 08:17
End Cal Date : 10-MAR-2011 16:58
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 10-Mar-2011 17:22
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4102.D
Level 2: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4103.D
Level 3: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4104.D
Level 4: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4105.D
Level 5: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4106.D
Level 6: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4107.D

	Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	___ RRF	% RSD	
8	Dichlorodifluoromethane	0.18825	0.15899	0.15993	0.16612	0.16898	0.16874	0.16850	6.280	
9	Chloromethane	0.34375	0.26007	0.21603	0.29592	0.24994	0.26185	0.27126	16.138	
10	Vinyl Chloride	0.30762	0.29117	0.29351	0.28084	0.27687	0.27437	0.28740	4.357	
11	Bromomethane	0.09347	0.06081	0.04665	0.09240	0.07124	0.07792	0.07375	24.721	
12	Chloroethane	0.15897	0.10934	0.07977	0.13980	0.10780	0.11178	0.11791	23.483	
13	Trichlorofluoromethane	0.28378	0.22651	0.21354	0.28423	0.25674	0.25762	0.25374	11.441	
14	Dichlorofluoromethane	0.29986	0.21002	0.20815	0.23652	0.26300	0.26311	0.24677	14.379	
15	Acrolein	0.02084	0.01845	0.02140	0.02804	0.02889	0.03199	0.02493	21.701	
16	Acetone	0.08265	0.08501	0.06389	0.07059	0.08613	0.08434	0.07877	11.740	
17	1,1-Dichloroethene	0.24518	0.24015	0.22737	0.22373	0.23051	0.23118	0.23302	3.468	
18	Freon-113	0.18857	0.17274	0.15480	0.15536	0.15687	0.15948	0.16464	8.186	
19	Iodomethane	0.47843	0.41968	0.37927	0.40596	0.39332	0.39984	0.41275	8.443	
20	Carbon Disulfide	0.57270	0.52642	0.47650	0.53585	0.55192	0.56900	0.53873	6.577	
21	Methylene Chloride	0.32411	0.29887	0.26838	0.26014	0.25871	0.25759	0.27797	9.868	
22	Acetonitrile	0.00903	0.01256	0.01298	0.01722	0.02333	0.02198	0.01618	34.990	<-
23	Acrylonitrile	0.08889	0.08773	0.09229	0.09365	0.10507	0.10626	0.09565	8.431	
24	Methyl tert-butyl ether	0.59819	0.58536	0.57228	0.58428	0.62882	0.64485	0.60230	4.722	
25	trans-1,2-Dichloroethene	0.29064	0.27926	0.26967	0.26340	0.27092	0.27045	0.27406	3.492	
26	Hexane	0.07313	0.06513	0.06225	0.05833	0.05805	0.05805	0.06249	9.519	
27	Vinyl acetate	0.40634	0.41901	0.41933	0.41086	0.45995	0.48319	0.43311	7.175	
28	1,1-Dichloroethane	0.54877	0.54705	0.52951	0.51920	0.54290	0.54904	0.53941	2.282	
29	tert-Butyl Alcohol	0.00660	0.00576	0.00631	0.00916	0.01376	0.01410	0.00928	40.767	<-
30	2-Butanone	0.10363	0.11007	0.10569	0.10668	0.12105	0.11739	0.11075	6.301	
M 31	1,2-Dichloroethene (total)	0.29626	0.29016	0.27928	0.27684	0.28273	0.28030	0.28426	2.617	
32	cis-1,2-dichloroethene	0.30188	0.30106	0.28889	0.29029	0.29453	0.29015	0.29447	1.955	
33	2,2-Dichloropropane	0.17475	0.19077	0.18056	0.18319	0.19497	0.19939	0.18727	4.992	
34	Bromochloromethane	0.14065	0.14853	0.14186	0.14019	0.15069	0.14981	0.14529	3.362	
35	Chloroform	0.44797	0.45710	0.44660	0.44713	0.45629	0.46175	0.45280	1.413	

Report Date : 11-Mar-2011 08:53

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAY-2010 08:17
End Cal Date : 10-MAR-2011 16:58
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 10-Mar-2011 17:22
Curve Type : Average

	Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD	
	36 Tetrahydrofuran	0.09884	0.07726	0.07143	0.07504	0.08382	0.08151	0.08132	11.885	
	37 1,1,1-Trichloroethane	0.28823	0.29862	0.29755	0.30563	0.32827	0.33256	0.30848	5.810	
	38 1,1-Dichloropropene	0.36898	0.37188	0.35845	0.35299	0.36289	0.36347	0.36311	1.890	
	39 Carbon Tetrachloride	0.24605	0.24775	0.25636	0.26906	0.28953	0.29914	0.26798	8.280	
	40 1,2-Dichloroethane	0.44079	0.46107	0.43738	0.42471	0.44948	0.44944	0.44381	2.809	
	41 Benzene	1.16302	1.09890	1.05496	1.03027	1.08574	1.07648	1.08489	4.174	
	42 Trichloroethene	0.31663	0.32627	0.30235	0.29725	0.31417	0.30992	0.31110	3.339	
	43 1,2-Dichloropropane	0.27795	0.28350	0.28812	0.27750	0.30105	0.29893	0.28784	3.547	
	44 1,4-Dioxane	0.00066	0.00101	0.00093	0.00107	0.00127	0.00125	0.00103	21.803	<-
	45 Dibromomethane	0.13846	0.14569	0.14386	0.13568	0.14785	0.14728	0.14314	3.478	
	46 Bromodichloromethane	0.22685	0.23666	0.24898	0.25886	0.29825	0.30677	0.26273	12.476	
	47 2-Chloroethyl vinyl ether	0.10175	0.11933	0.12643	0.12424	0.14734	0.14212	0.12687	12.936	
	48 cis-1,3-Dichloropropene	0.21262	0.24370	0.26200	0.27146	0.32983	0.34414	0.27729	18.252	
	49 4-Methyl-2-pentanone	0.17509	0.20429	0.22578	0.21744	0.24637	0.24516	0.21902	12.296	
	50 Toluene	1.53278	1.48301	1.45778	1.43194	1.49067	1.50721	1.48390	2.404	
	51 trans-1,3-Dichloropropene	0.21219	0.23572	0.25047	0.27796	0.33656	0.35593	0.27814	20.578	
	52 Ethyl Methacrylate	0.24515	0.27570	0.28776	0.29725	0.33383	0.33530	0.29583	11.752	
	53 1,1,2-Trichloroethane	0.25387	0.24813	0.24848	0.23844	0.25358	0.24550	0.24800	2.305	
	54 1,3-Dichloropropane	0.43010	0.43744	0.43767	0.40817	0.44432	0.42564	0.43056	2.961	
	55 Tetrachloroethene	0.33380	0.31139	0.30704	0.29488	0.29542	0.28987	0.30540	5.273	
	56 2-Hexanone	0.17328	0.18716	0.18915	0.19582	0.21019	0.20102	0.19277	6.584	
	57 Dibromochloromethane	0.17655	0.18163	0.20844	0.22679	0.26894	0.27434	0.22278	18.876	
	58 1,2-Dibromoethane	0.21687	0.23211	0.23654	0.23092	0.25190	0.24426	0.23543	5.120	
	59 Chlorobenzene	1.00087	1.00432	0.94749	0.92771	0.95725	0.93456	0.96203	3.436	
	60 1,1,1,2-Tetrachloroethane	0.22659	0.25039	0.26181	0.27561	0.30429	0.31312	0.27197	12.060	
	61 Ethylbenzene	0.50130	0.51771	0.49023	0.49884	0.51105	0.49764	0.50279	1.974	
	62 m + p-Xylene	0.64407	0.63547	0.62238	0.61981	0.63820	0.62937	0.63155	1.491	
M	63 Xylenes (total)	0.63167	0.62602	0.60709	0.61314	0.62773	0.61767	0.62055	1.528	
	64 Xylene-o	0.60687	0.60712	0.57652	0.59980	0.60678	0.59425	0.59856	1.999	
	65 Styrene	0.80751	0.85417	0.86380	0.90202	0.97299	0.95417	0.89244	7.067	
	66 Bromoform	0.07746	0.08387	0.09239	0.10404	0.12461	0.13532	0.10295	22.336	<-
	67 Isopropylbenzene	1.50281	1.51501	1.45752	1.51515	1.55591	1.51908	1.51091	2.102	
	68 1,1,2,2-Tetrachloroethane	0.49913	0.50572	0.51027	0.48100	0.51640	0.52146	0.50566	2.848	
	69 1,4-Dichloro-2-butene	0.07997	0.07419	0.08285	0.09954	0.12520	0.13816	0.09998	26.284	
	70 1,2,3-Trichloropropane	0.21151	0.18680	0.18988	0.16963	0.18158	0.17455	0.18566	7.932	
	71 Bromobenzene	0.76068	0.74364	0.73952	0.69526	0.74920	0.73543	0.73729	3.035	

Report Date : 11-Mar-2011 08:53

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAY-2010 08:17
End Cal Date : 10-MAR-2011 16:58
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 10-Mar-2011 17:22
Curve Type : Average

Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD	
72 n-Propylbenzene	0.81287	0.81131	0.80453	0.77300	0.81281	0.78473	0.79988	2.122	
73 2-Chlorotoluene	0.73754	0.73027	0.73637	0.68321	0.72416	0.69787	0.71824	3.128	
74 1,3,5-Trimethylbenzene	2.23333	2.20684	2.24345	2.24105	2.37587	2.34696	2.27458	3.038	
75 4-Chlorotoluene	0.80212	0.77906	0.75641	0.70082	0.74392	0.72338	0.75095	4.897	
76 tert-Butylbenzene	2.10041	2.03296	2.04705	1.96672	2.08418	2.06450	2.04930	2.305	
77 1,2,4-Trimethylbenzene	2.14853	2.24656	2.26108	2.23649	2.35133	2.33311	2.26285	3.235	
78 sec-Butylbenzene	2.72209	2.74467	2.70489	2.67213	2.79608	2.73343	2.72888	1.522	
79 4-Isopropyltoluene	2.27952	2.26366	2.28885	2.28624	2.38693	2.36378	2.31150	2.196	
80 1,3-Dichlorobenzene	1.44811	1.40998	1.36830	1.30330	1.37854	1.35053	1.37646	3.611	
81 1,4-Dichlorobenzene	1.52533	1.45762	1.40406	1.34620	1.39463	1.37573	1.41726	4.547	
82 n-Butylbenzene	1.97825	1.83504	1.80995	1.88436	1.93560	1.94429	1.89791	3.487	
83 1,2-Dichlorobenzene	1.37696	1.31855	1.27682	1.23473	1.24239	1.27386	1.28722	4.123	
84 1,2-Dibromo-3-chloropropane	0.05873	0.07387	0.06650	0.06476	0.07538	0.09163	0.07181	15.983	
85 1,2,4-Trichlorobenzene	0.96132	0.81988	0.77090	0.80548	0.78572	0.83386	0.82953	8.250	
86 Hexachlorobutadiene	0.36794	0.30752	0.28129	0.29581	0.28965	0.30074	0.30716	10.129	
87 Naphthalene	1.79623	1.68696	1.70362	1.74659	1.76700	1.97964	1.78001	5.940	
88 1,2,3-Trichlorobenzene	0.86413	0.73022	0.70604	0.71663	0.67418	0.72320	0.73573	8.956	
89 Ethyl Ether	0.32656	0.30958	0.29560	0.29723	0.33773	0.32931	0.31600	5.608	
90 Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
91 3-Chloropropene	0.09616	0.10305	0.09948	0.10766	0.12300	0.12675	0.10935	11.592	
92 Isopropyl Ether	0.21923	0.23135	0.22357	0.22763	0.25388	0.25458	0.23504	6.554	
93 2-Chloro-1,3-butadiene	0.51756	0.50985	0.51068	0.54461	0.62836	0.66221	0.56221	11.819	
94 Propionitrile	0.02006	0.02787	0.03085	0.02805	0.03701	0.03702	0.03014	21.309	
95 Ethyl Acetate	0.21383	0.22492	0.19682	0.21776	0.23795	0.23390	0.22086	6.762	
96 Methacrylonitrile	0.20375	0.17561	0.15682	0.14856	0.17045	0.17013	0.17089	11.100	
97 Isobutanol	0.00563	0.00561	0.00581	0.00567	0.00692	0.00876	0.00640	19.686	<-
98 Cyclohexane	0.60671	0.58349	0.55200	0.54038	0.54330	0.53943	0.56088	4.967	
99 n-Butanol	0.00450	0.00261	0.00427	0.00485	0.00596	0.00689	0.00484	30.444	<-
100 Methyl Methacrylate	0.19812	0.19373	0.19577	0.21620	0.24084	0.22452	0.21153	8.957	
101 2-Nitropropane	0.03117	0.03070	0.02711	0.03055	0.03590	0.03733	0.03213	11.804	
102 Chloropicrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
103 Cyclohexanone	0.01486	0.01600	0.01819	0.01610	0.02241	0.02737	0.01916	25.227	
104 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
105 Benzyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
134 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
135 Crotononitrile(1st Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Report Date : 11-Mar-2011 08:53

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAY-2010 08:17
End Cal Date : 10-MAR-2011 16:58
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 10-Mar-2011 17:22
Curve Type : Average

	Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD	
	136 Crotononitrile(2nd Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
M	137 Total Crotononitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	138 Paraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	139 3,3,5-Trimethylcyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	140 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	141 1,3,5-Trichlorobenzene	0.96841	0.82846	0.83286	0.85859	0.85970	0.90019	0.87470	6.007	
	143 Methyl Acetate	0.19474	0.21476	0.19661	0.20392	0.22219	0.22645	0.20978	6.361	
	144 Methylcyclohexane	0.44144	0.42881	0.41616	0.40525	0.40333	0.39918	0.41570	3.982	
	145 Dimethoxymethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	146 2-Methylnaphthalene	0.61098	0.64973	0.78401	0.78852	0.98463	1.17982	0.83295	25.779	
	147 Tetrahydrothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	148 1,4-Dichlorobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	151 Ethyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	152 Vinyl Acetate-86	0.03208	0.02904	0.03050	0.02953	0.03520	0.03529	0.03194	8.646	
	153 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
	154 n-Heptane	0.38431	0.41286	0.36966	0.38334	0.39613	0.38675	0.38884	3.732	
	155 tert-Butyl Ethyl Ether	0.78078	0.80102	0.75686	0.77637	0.89671	0.91123	0.82050	8.083	
	156 tert-Amyl Methyl Ether	0.46136	0.45455	0.45813	0.46927	0.54425	0.55328	0.49014	9.336	
	157 1,2,3-Trimethylbezene	1.91845	1.93412	2.00788	2.08007	2.36156	2.38086	2.11383	9.822	
	158 n-Butyl Acetate	0.24194	0.25068	0.24875	0.26864	0.31196	0.30802	0.27166	11.408	
$	4 Dibromofluoromethane	0.26191	0.24914	0.25292	0.25825	0.26174	0.26370	0.25794	2.235	
$	5 1,2-Dichloroethane-d4	0.35269	0.32719	0.31058	0.30983	0.32698	0.32749	0.32579	4.786	
$	6 Toluene-d8	1.32111	1.25538	1.24832	1.22177	1.23529	1.23634	1.25303	2.818	
$	7 Bromofluorobenzene	0.42704	0.39011	0.38696	0.38824	0.39411	0.38696	0.39557	3.956	

Report Date : 11-Mar-2011 09:08

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAY-2010 08:17
End Cal Date : 10-MAR-2011 16:58
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 11-Mar-2011 09:05 a3ux15.i

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4102.D
Level 2: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4103.D
Level 3: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4104.D
Level 4: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4105.D
Level 5: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4106.D
Level 6: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4107.D

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
8 Dichlorodifluoromethane	0.18825	0.15899	0.15993	0.16612	0.16898	0.16874	AVRG		0.16850		6.27954
9 Chloromethane	60165	89044	193795	527493	961729	2026549	WLINR	-0.01402	0.25987		0.99263
10 Vinyl Chloride	0.30762	0.29117	0.29351	0.28084	0.27687	0.27437	AVRG		0.28740		4.35747
11 Bromomethane	16359	20819	41853	164706	274104	603032	QUAD	0.05129	12.57894	0.42112	0.99122
12 Chloroethane	27824	37435	71561	249204	414783	865098	QUAD	0.02829	8.14942	1.70538	0.99256
13 Trichlorofluoromethane	0.28378	0.22651	0.21354	0.28423	0.25674	0.25762	AVRG		0.25374		11.44125
14 Dichlorofluoromethane	0.29986	0.21002	0.20815	0.23652	0.26300	0.26311	AVRG		0.24677		14.37921
15 Acrolein	36482	63159	191950	499746	1111468	2476111	WLINR	0.64520	0.03123		0.99316
16 Acetone	0.08265	0.08501	0.06389	0.07059	0.08613	0.08434	AVRG		0.07877		11.73958
17 1,1-Dichloroethene	0.24518	0.24015	0.22737	0.22373	0.23051	0.23118	AVRG		0.23302		3.46842
18 Freon-113	0.18857	0.17274	0.15480	0.15536	0.15687	0.15948	AVRG		0.16464		8.18620
19 Iodomethane	0.47843	0.41968	0.37927	0.40596	0.39332	0.39984	AVRG		0.41275		8.44340
20 Carbon Disulfide	0.57270	0.52642	0.47650	0.53585	0.55192	0.56900	AVRG		0.53873		6.57687
21 Methylene Chloride	0.32411	0.29887	0.26838	0.26014	0.25871	0.25759	AVRG		0.27797		9.86813

Report Date : 11-Mar-2011 09:08

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 17-MAY-2010 08:17
End Cal Date : 10-MAR-2011 16:58
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 11-Mar-2011 09:05 a3ux15.i

	Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	22 Acetonitrile	15800	43020	116439	306993	897703	1701221	QUAD	1.55680	39.87842	4.06730	0.99540	<-
	23 Acrylonitrile	0.08889	0.08773	0.09229	0.09365	0.10507	0.10626	AVRG		0.09565		8.43074	
	24 Methyl tert-butyl ether	0.59819	0.58536	0.57228	0.58428	0.62882	0.64485	AVRG		0.60230		4.72185	
	25 trans-1,2-Dichloroethene	0.29064	0.27926	0.26967	0.26340	0.27092	0.27045	AVRG		0.27406		3.49154	
	26 Hexane	0.07313	0.06513	0.06225	0.05833	0.05805	0.05805	AVRG		0.06249		9.51866	
	27 Vinyl acetate	0.40634	0.41901	0.41933	0.41086	0.45995	0.48319	AVRG		0.43311		7.17541	
	28 1,1-Dichloroethane	0.54877	0.54705	0.52951	0.51920	0.54290	0.54904	AVRG		0.53941		2.28155	
	29 tert-Butyl Alcohol	23116	39476	113294	326731	1059161	2182204	QUAD	3.51778	72.34014	-4.32067	0.99398	<-
	30 2-Butanone	0.10363	0.11007	0.10569	0.10668	0.12105	0.11739	AVRG		0.11075		6.30124	
M	31 1,2-Dichloroethene (total)	0.29626	0.29016	0.27928	0.27684	0.28273	0.28030	AVRG		0.28426		2.61690	
	32 cis-1,2-dichloroethene	0.30188	0.30106	0.28889	0.29029	0.29453	0.29015	AVRG		0.29447		1.95485	
	33 2,2-Dichloropropane	0.17475	0.19077	0.18056	0.18319	0.19497	0.19939	AVRG		0.18727		4.99152	
	34 Bromochloromethane	0.14065	0.14853	0.14186	0.14019	0.15069	0.14981	AVRG		0.14529		3.36184	
	35 Chloroform	0.44797	0.45710	0.44660	0.44713	0.45629	0.46175	AVRG		0.45280		1.41287	
	36 Tetrahydrofuran	0.09884	0.07726	0.07143	0.07504	0.08382	0.08151	AVRG		0.08132		11.88505	
	37 1,1,1-Trichloroethane	0.28823	0.29862	0.29755	0.30563	0.32827	0.33256	AVRG		0.30848		5.80970	
	38 1,1-Dichloropropene	0.36898	0.37188	0.35845	0.35299	0.36289	0.36347	AVRG		0.36311		1.89035	
	39 Carbon Tetrachloride	0.24605	0.24775	0.25636	0.26906	0.28953	0.29914	AVRG		0.26798		8.28030	
	40 1,2-Dichloroethane	0.44079	0.46107	0.43738	0.42471	0.44948	0.44944	AVRG		0.44381		2.80926	
	41 Benzene	1.16302	1.09890	1.05496	1.03027	1.08574	1.07648	AVRG		1.08489		4.17352	
	42 Trichloroethene	0.31663	0.32627	0.30235	0.29725	0.31417	0.30992	AVRG		0.31110		3.33945	
	43 1,2-Dichloropropane	0.27795	0.28350	0.28812	0.27750	0.30105	0.29893	AVRG		0.28784		3.54683	

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TestAmerica North Canton

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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 11-Mar-2011 09:05 a3ux15.i

	Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
	44 1,4-Dioxane	5799	17228	41642	95490	243446	484964	WLINR	2.88518	0.00126		0.99584	<-
	45 Dibromomethane	0.13846	0.14569	0.14386	0.13568	0.14785	0.14728	AVRG		0.14314		3.47768	
	46 Bromodichloromethane	0.22685	0.23666	0.24898	0.25886	0.29825	0.30677	AVRG		0.26273		12.47604	
	47 2-Chloroethyl vinyl ether	0.10175	0.11933	0.12643	0.12424	0.14734	0.14212	AVRG		0.12687		12.93624	
-	48 cis-1,3-Dichloropropene	37213	83438	235037	483893	1269125	2663416	WLINR	0.05752	0.33805		0.99423	
	49 4-Methyl-2-pentanone	0.17509	0.20429	0.22578	0.21744	0.24637	0.24516	AVRG		0.21902		12.29629	
	50 Toluene	1.53278	1.48301	1.45778	1.43194	1.49067	1.50721	AVRG		1.48390		2.40371	
-	51 trans-1,3-Dichloropropene	27939	62192	175386	378102	1032090	2191856	WLINR	0.06462	0.34851		0.99274	
	52 Ethyl Methacrylate	0.24515	0.27570	0.28776	0.29725	0.33383	0.33530	AVRG		0.29583		11.75168	
	53 1,1,2-Trichloroethane	0.25387	0.24813	0.24848	0.23844	0.25358	0.24550	AVRG		0.24800		2.30549	
	54 1,3-Dichloropropane	0.43010	0.43744	0.43767	0.40817	0.44432	0.42564	AVRG		0.43056		2.96130	
	55 Tetrachloroethene	0.33380	0.31139	0.30704	0.29488	0.29542	0.28987	AVRG		0.30540		5.27299	
	56 2-Hexanone	0.17328	0.18716	0.18915	0.19582	0.21019	0.20102	AVRG		0.19277		6.58352	
-	57 Dibromochloromethane	23246	47921	145958	308492	824730	1689420	WLINR	0.05798	0.27208		0.99541	
	58 1,2-Dibromoethane	0.21687	0.23211	0.23654	0.23092	0.25190	0.24426	AVRG		0.23543		5.12001	
	59 Chlorobenzene	1.00087	1.00432	0.94749	0.92771	0.95725	0.93456	AVRG		0.96203		3.43603	
	60 1,1,1,2-Tetrachloroethane	0.22659	0.25039	0.26181	0.27561	0.30429	0.31312	AVRG		0.27197		12.06017	
	61 Ethylbenzene	0.50130	0.51771	0.49023	0.49884	0.51105	0.49764	AVRG		0.50279		1.97443	
	62 m + p-Xylene	0.64407	0.63547	0.62238	0.61981	0.63820	0.62937	AVRG		0.63155		1.49051	
M	63 Xylenes (total)	0.63167	0.62602	0.60709	0.61314	0.62773	0.61767	AVRG		0.62055		1.52783	
	64 Xylene-o	0.60687	0.60712	0.57652	0.59980	0.60678	0.59425	AVRG		0.59856		1.99905	
	65 Styrene	0.80751	0.85417	0.86380	0.90202	0.97299	0.95417	AVRG		0.89244		7.06721	

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 11-Mar-2011 09:05 a3ux15.i

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
- 66 Bromoform	10199	22129	64692	141526	382135	833346	WLINR	0.06976	0.13165		0.99161	<-
67 Isopropylbenzene	1.50281	1.51501	1.45752	1.51515	1.55591	1.51908	AVRG		1.51091		2.10189	
68 1,1,2,2-Tetrachloroethane	0.49913	0.50572	0.51027	0.48100	0.51640	0.52146	AVRG		0.50566		2.84829	
- 69 1,4-Dichloro-2-butene	5331	9871	28682	72023	198381	429910	QUAD	0.09791	8.48342	-2.60381	0.99835	
70 1,2,3-Trichloropropane	0.21151	0.18680	0.18988	0.16963	0.18158	0.17455	AVRG		0.18566		7.93163	
71 Bromobenzene	0.76068	0.74364	0.73952	0.69526	0.74920	0.73543	AVRG		0.73729		3.03542	
72 n-Propylbenzene	0.81287	0.81131	0.80453	0.77300	0.81281	0.78473	AVRG		0.79988		2.12160	
73 2-Chlorotoluene	0.73754	0.73027	0.73637	0.68321	0.72416	0.69787	AVRG		0.71824		3.12760	
74 1,3,5-Trimethylbenzene	2.23333	2.20684	2.24345	2.24105	2.37587	2.34696	AVRG		2.27458		3.03843	
75 4-Chlorotoluene	0.80212	0.77906	0.75641	0.70082	0.74392	0.72338	AVRG		0.75095		4.89664	
76 tert-Butylbenzene	2.10041	2.03296	2.04705	1.96672	2.08418	2.06450	AVRG		2.04930		2.30454	
77 1,2,4-Trimethylbenzene	2.14853	2.24656	2.26108	2.23649	2.35133	2.33311	AVRG		2.26285		3.23518	
78 sec-Butylbenzene	2.72209	2.74467	2.70489	2.67213	2.79608	2.73343	AVRG		2.72888		1.52222	
79 4-Isopropyltoluene	2.27952	2.26366	2.28885	2.28624	2.38693	2.36378	AVRG		2.31150		2.19621	
80 1,3-Dichlorobenzene	1.44811	1.40998	1.36830	1.30330	1.37854	1.35053	AVRG		1.37646		3.61092	
81 1,4-Dichlorobenzene	1.52533	1.45762	1.40406	1.34620	1.39463	1.37573	AVRG		1.41726		4.54737	
82 n-Butylbenzene	1.97825	1.83504	1.80995	1.88436	1.93560	1.94429	AVRG		1.89791		3.48701	
83 1,2-Dichlorobenzene	1.37696	1.31855	1.27682	1.23473	1.24239	1.27386	AVRG		1.28722		4.12341	
- 84 1,2-Dibromo-3-chloropropane	3915	9828	23024	46860	119433	285120	QUAD	0.01028	15.14942	-11.65700	0.99954	
85 1,2,4-Trichlorobenzene	0.96132	0.81988	0.77090	0.80548	0.78572	0.83386	AVRG		0.82953		8.24963	
86 Hexachlorobutadiene	0.36794	0.30752	0.28129	0.29581	0.28965	0.30074	AVRG		0.30716		10.12937	
87 Naphthalene	1.79623	1.68696	1.70362	1.74659	1.76700	1.97964	AVRG		1.78001		5.93994	

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TestAmerica North Canton

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Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Last Edit : 11-Mar-2011 09:05 a3ux15.i

	Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
88	1,2,3-Trichlorobenzene	0.86413	0.73022	0.70604	0.71663	0.67418	0.72320	AVRG		0.73573		8.95583	
89	Ethyl Ether	0.32656	0.30958	0.29560	0.29723	0.33773	0.32931	AVRG		0.31600		5.60842	
90	Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
91	3-Chloropropene	0.09616	0.10305	0.09948	0.10766	0.12300	0.12675	AVRG		0.10935		11.59177	
92	Isopropyl Ether	0.21923	0.23135	0.22357	0.22763	0.25388	0.25458	AVRG		0.23504		6.55434	
93	2-Chloro-1,3-butadiene	0.51756	0.50985	0.51068	0.54461	0.62836	0.66221	AVRG		0.56221		11.81909	
94	Propionitrile	7167	19576	53575	99569	265923	546611	WLINR	0.11664	0.03686		0.99329	
95	Ethyl Acetate	0.21383	0.22492	0.19682	0.21776	0.23795	0.23390	AVRG		0.22086		6.76192	
96	Methacrylonitrile	0.20375	0.17561	0.15682	0.14856	0.17045	0.17013	AVRG		0.17089		11.10042	
97	Isobutanol	15495	30511	77138	156060	380398	941521	QUAD	0.62704	166	-75.38421	0.99927	<-
98	Cyclohexane	0.60671	0.58349	0.55200	0.54038	0.54330	0.53943	AVRG		0.56088		4.96661	
99	n-Butanol	12379	14184	56638	133319	327517	740199	QUAD	1.82417	181	-71.12607	0.99887	<-
100	Methyl Methacrylate	0.19812	0.19373	0.19577	0.21620	0.24084	0.22452	AVRG		0.21153		8.95714	
101	2-Nitropropane	0.03117	0.03070	0.02711	0.03055	0.03590	0.03733	AVRG		0.03213		11.80389	
102	Chloropicrin	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
103	Cyclohexanone	9953	21487	60611	113109	293298	760498	QUAD	0.69239	50.60424	-13.49759	0.99728	
104	Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
105	Benzyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
134	Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
135	Crotononitrile(1st Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
136	Crotononitrile(2nd Isomer)	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
M 137	Total Crotononitrile	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

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Last Edit : 11-Mar-2011 09:05 a3ux15.i

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
138 Paraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
139 3,3,5-Trimethylcyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
140 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
141 1,3,5-Trichlorobenzene	0.96841	0.82846	0.83286	0.85859	0.85970	0.90019	AVRG		0.87470		6.00748	
143 Methyl Acetate	0.19474	0.21476	0.19661	0.20392	0.22219	0.22645	AVRG		0.20978		6.36114	
144 Methylcyclohexane	0.44144	0.42881	0.41616	0.40525	0.40333	0.39918	AVRG		0.41570		3.98205	
145 Dimethoxymethane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
146 2-Methylnaphthalene	81848	174462	522415	1107607	2576828	6555406	QUAD	0.13091	1.12904	-0.03141	0.99908	
147 Tetrahydrothiophene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
148 1,4-Dichlorobutane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
151 Ethyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
152 Vinyl Acetate-86	0.03208	0.02904	0.03050	0.02953	0.03520	0.03529	AVRG		0.03194		8.64613	
153 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
154 n-Heptane	0.38431	0.41286	0.36966	0.38334	0.39613	0.38675	AVRG		0.38884		3.73217	
155 tert-Butyl Ethyl Ether	0.78078	0.80102	0.75686	0.77637	0.89671	0.91123	AVRG		0.82050		8.08329	
156 tert-Amyl Methyl Ether	0.46136	0.45455	0.45813	0.46927	0.54425	0.55328	AVRG		0.49014		9.33585	
157 1,2,3-Trimethylbezene	1.91845	1.93412	2.00788	2.08007	2.36156	2.38086	AVRG		2.11383		9.82150	
158 n-Butyl Acetate	0.24194	0.25068	0.24875	0.26864	0.31196	0.30802	AVRG		0.27166		11.40808	
$ 4 Dibromofluoromethane	0.26191	0.24914	0.25292	0.25825	0.26174	0.26370	AVRG		0.25794		2.23513	
$ 5 1,2-Dichloroethane-d4	0.35269	0.32719	0.31058	0.30983	0.32698	0.32749	AVRG		0.32579		4.78624	
$ 6 Toluene-d8	1.32111	1.25538	1.24832	1.22177	1.23529	1.23634	AVRG		1.25303		2.81765	

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Last Edit : 11-Mar-2011 09:05 a3ux15.i

Compound	5.0000 Level 1	10.0000 Level 2	25.0000 Level 3	50.0000 Level 4	100.0000 Level 5	200.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 7 Bromofluorobenzene	0.42704	0.39011	0.38696	0.38824	0.39411	0.38696	AVRG		0.39557		3.95585

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Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Wt Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Data review checklist: 8260 A/8260B/624 Initial Calibration

Method (check the applicable box): ☐ 8260A ☒ 8260B ☐ 624

Analysis Date: 3/10/11 **Run batch ID:** _____

Curve ID: C1B310A-IC.b **(curve ID must include instrument designation and date reference)**

Acceptance criteria is found in the applicable laboratory SOP. If item is N/A, mark as such in Notes column

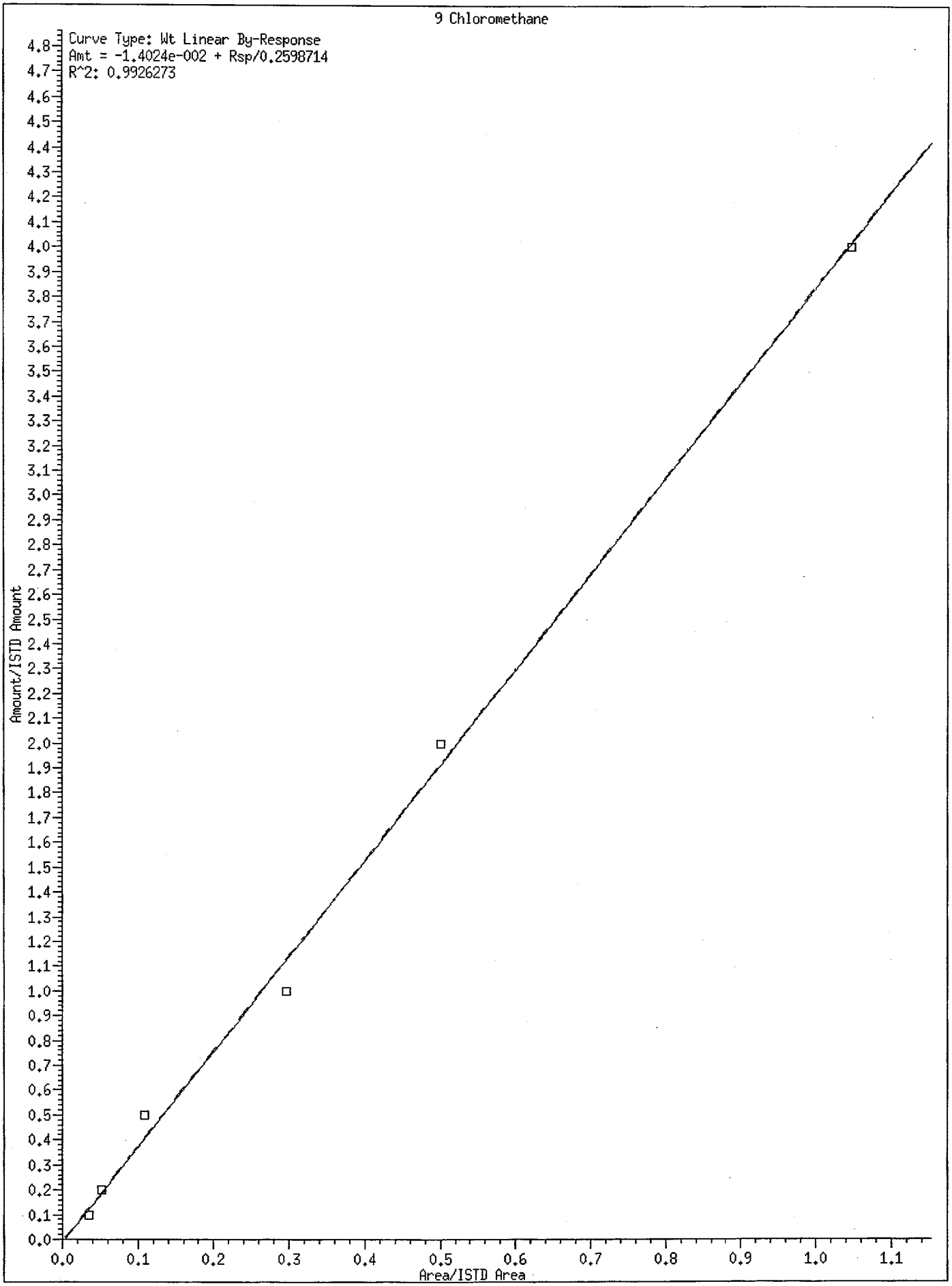
Item for review	Level I Yes	Level I No	Level II Yes	Level II No	
Tune:			✓		
BFB passes, all points within 12 hr clock (24 hr for 624)			✓		
All calibration points ID'd on Calibration Summary Form			✓		
Documentation: Raw data and run logs present for all points			✓		
Run log and Raw data clearly indicate method by version			✓		
RLs: Minimum of 5 points, lowest standards at or below RL			✓		
Linearity: 8260 CCCs ≤ 30% RSD			✓		
Linear Regression curve fit for all >15% RSD (35% 624) r2>0.980 (r>0.990)	☐	☐	☑ ✓	☐	
Plots for all Linear Regressions printed	☐	☐	☑ ✓	☐	
Response: SPCCs all pass minimum response factors 0.30	☐	☐	☑ ✓	☐	
ICV- Second source standard Analytes 60-140% recovery, problem compounds may be allowed outside these limits, but must be evaluated (acrolein, acrylonitrile, 2-ceve, propionitrile, trans 1,4-dichloro-2-butene) Internal Standards 50-200% of recent curve	☐	☐	☑ ✓	☐	
Manual integrations: necessary, correct & documented	☐	☐	*		
Other: Verify Avg RF on Cal Summary matches Avg RF on Con Cal form	☐	☐	☐	☐	NA

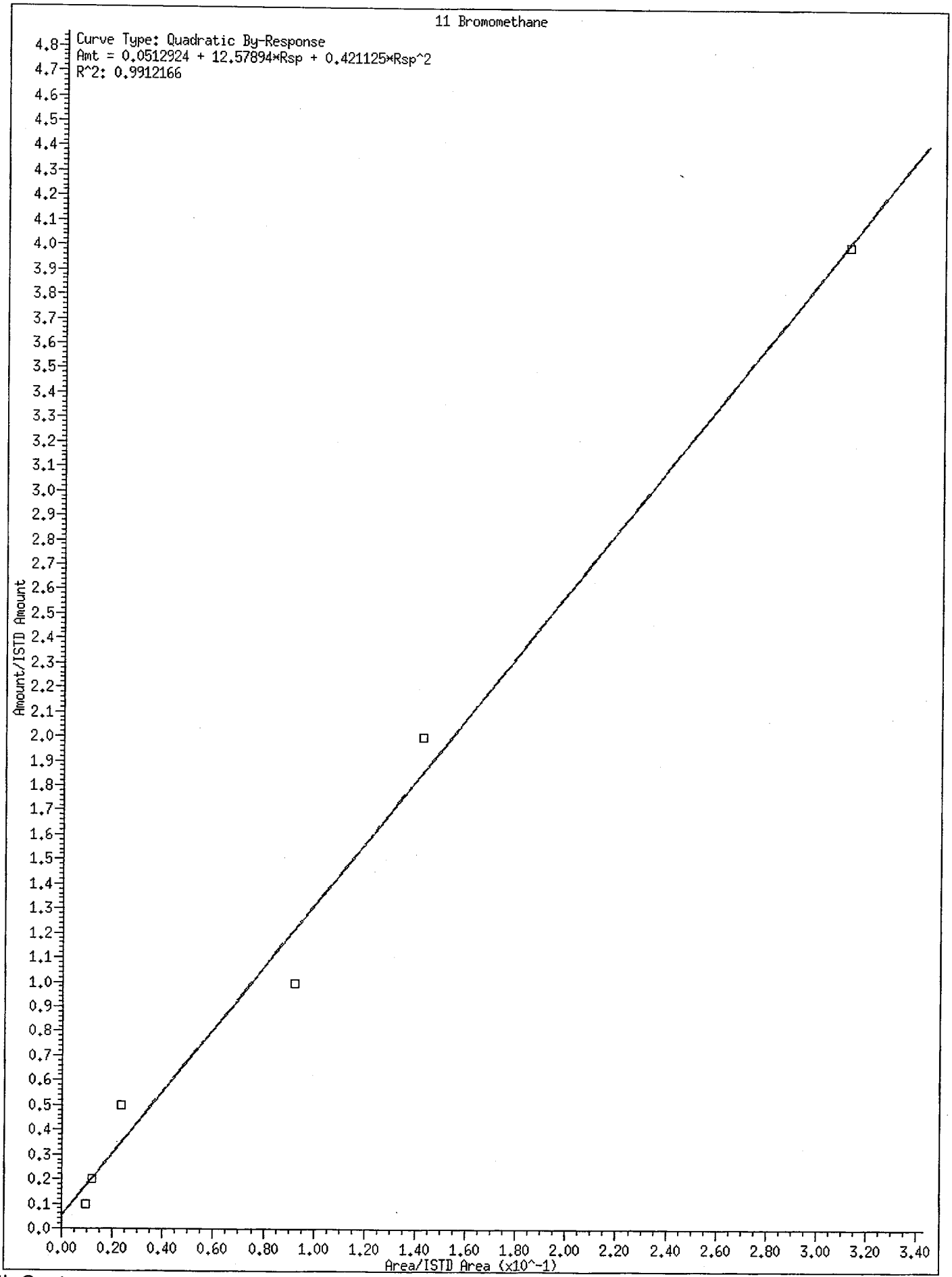
Reviewed by Analyst/ Level I: Williams Date: 3/11/11

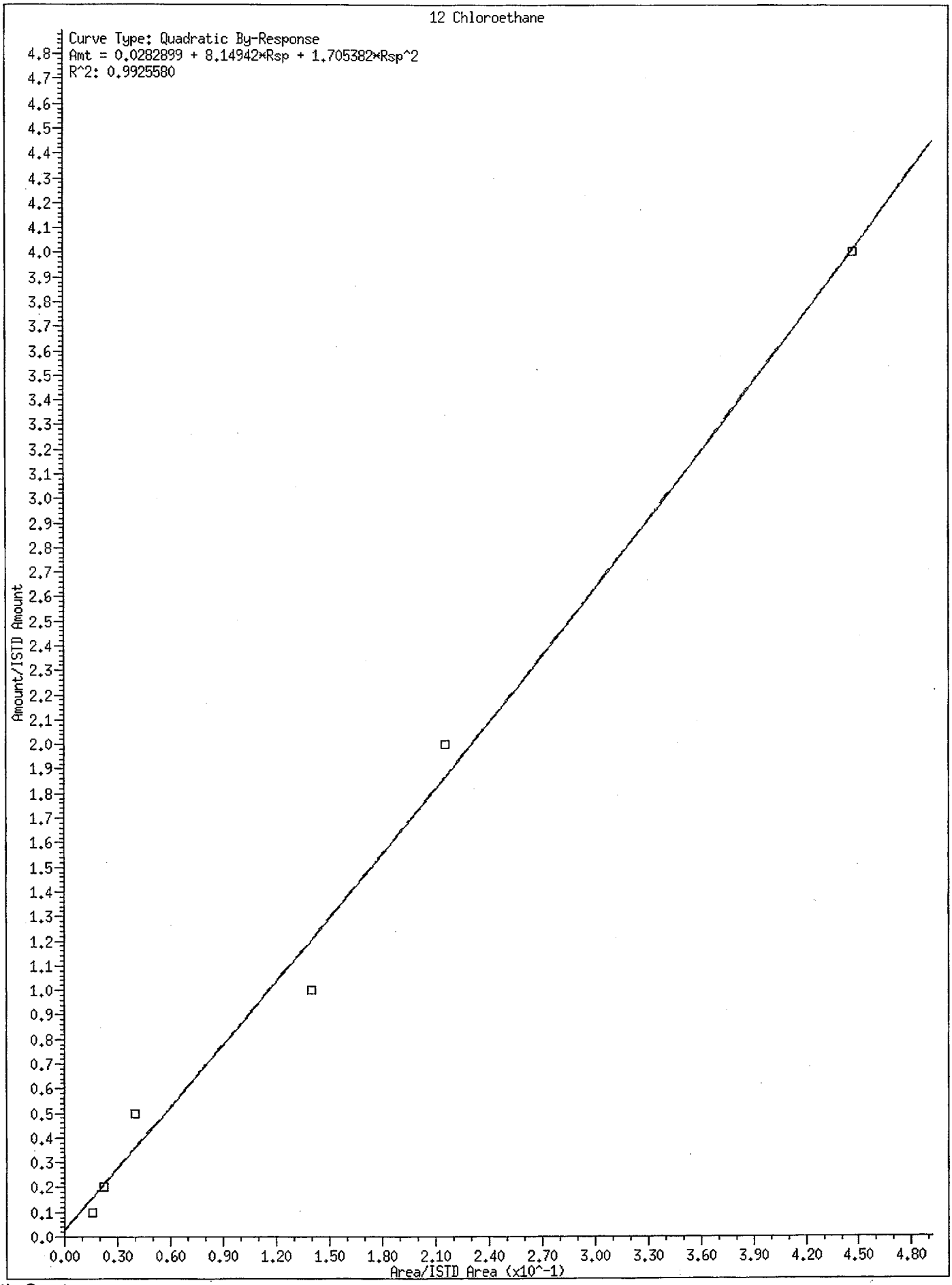
Reviewed by Peer/Sup/ Level II: Thomas E. Sattler Date: 3/22/11
By signing in "Reviewed by" above I agree that I have reviewed the data as indicated on this checklist.

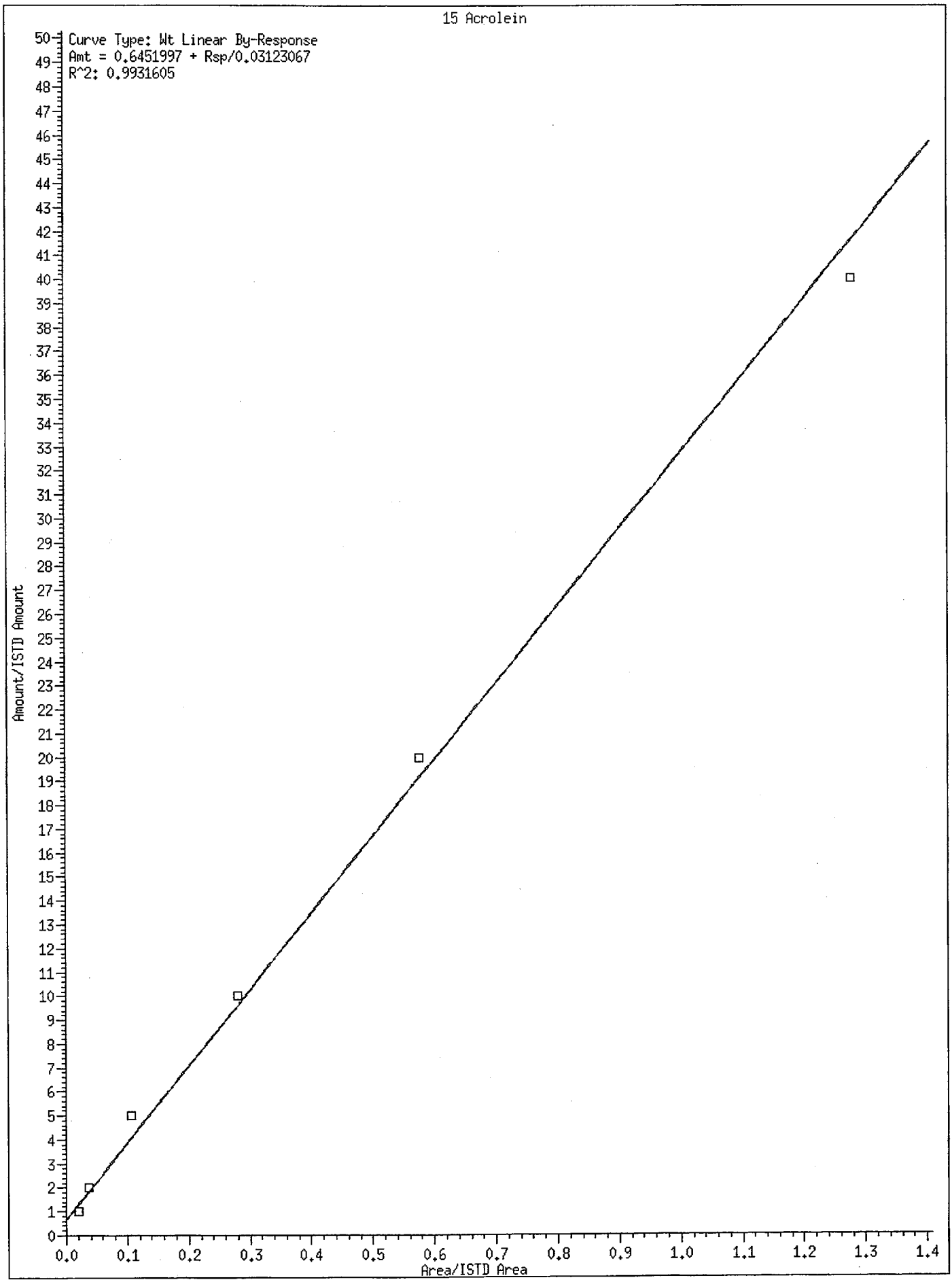
*Peer/Sup only: In addition to the items above, all manual integrations in this package have been reviewed and found acceptable.

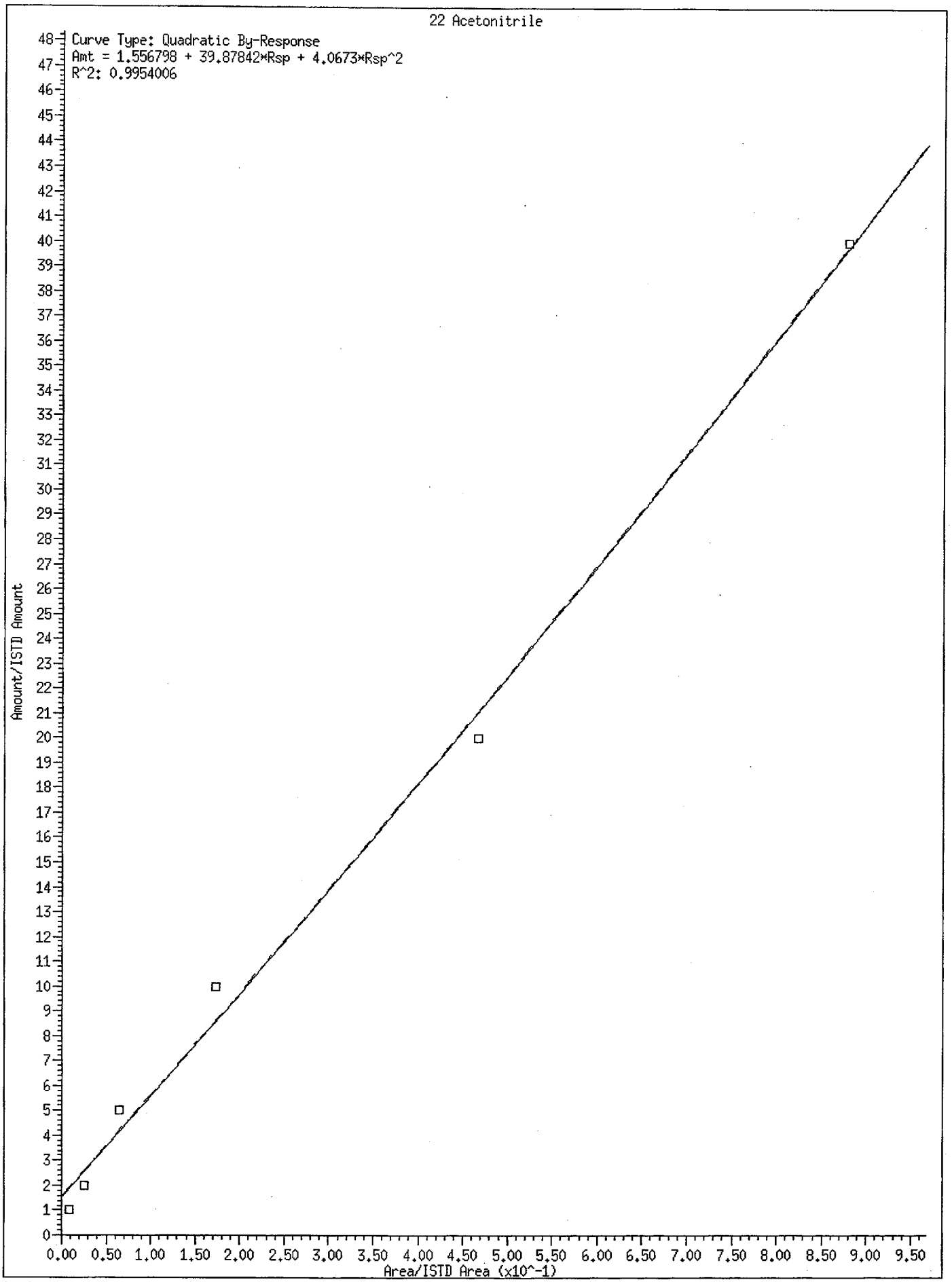
Reviewed by Peer/Sup: _____ Date: _____

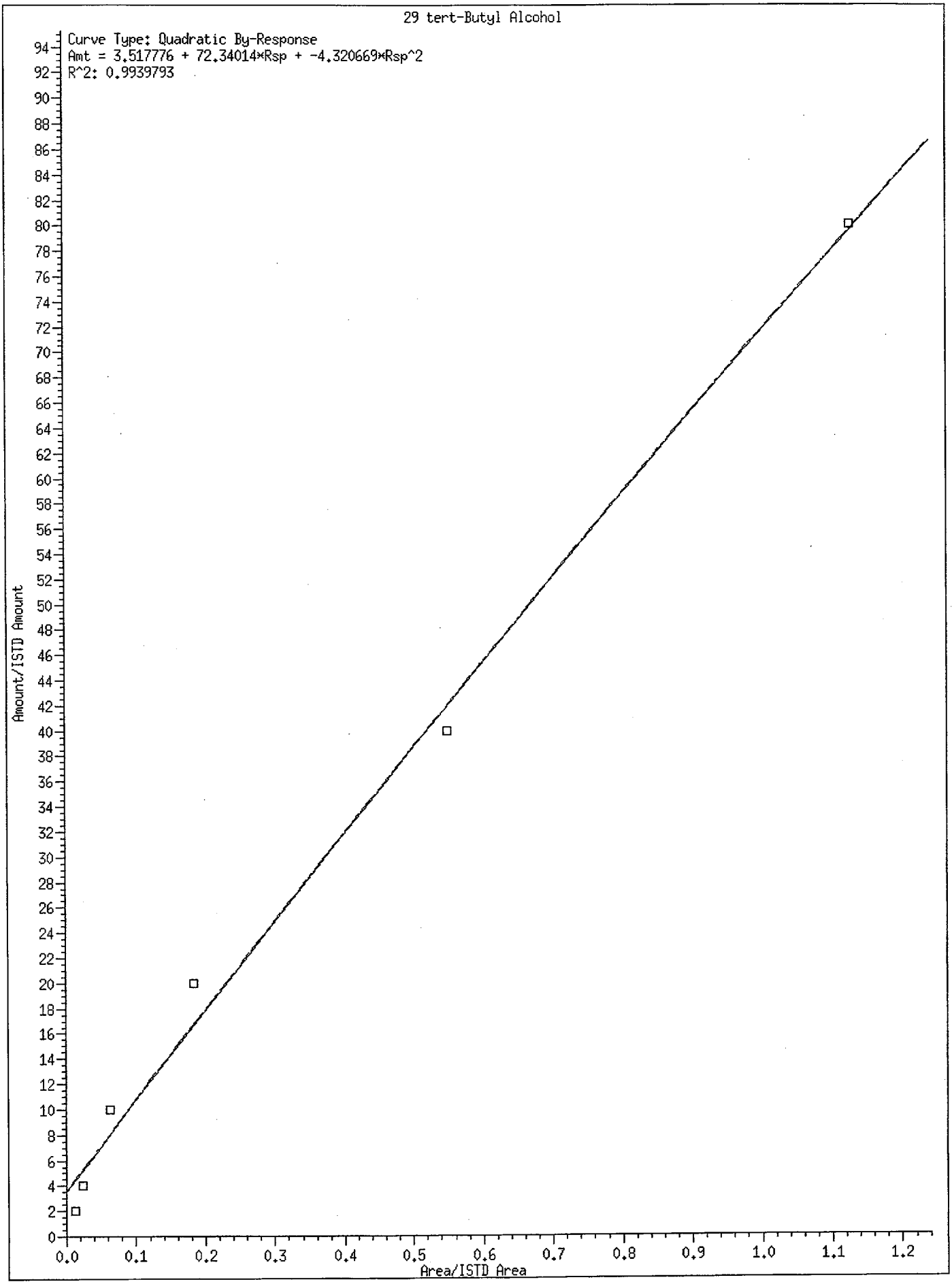

9 Chloromethane
Curve Type: Wt Linear By-Response
Amt = -1.4024e-002 + Rsp/0.2598714
R^2: 0.9926273
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1

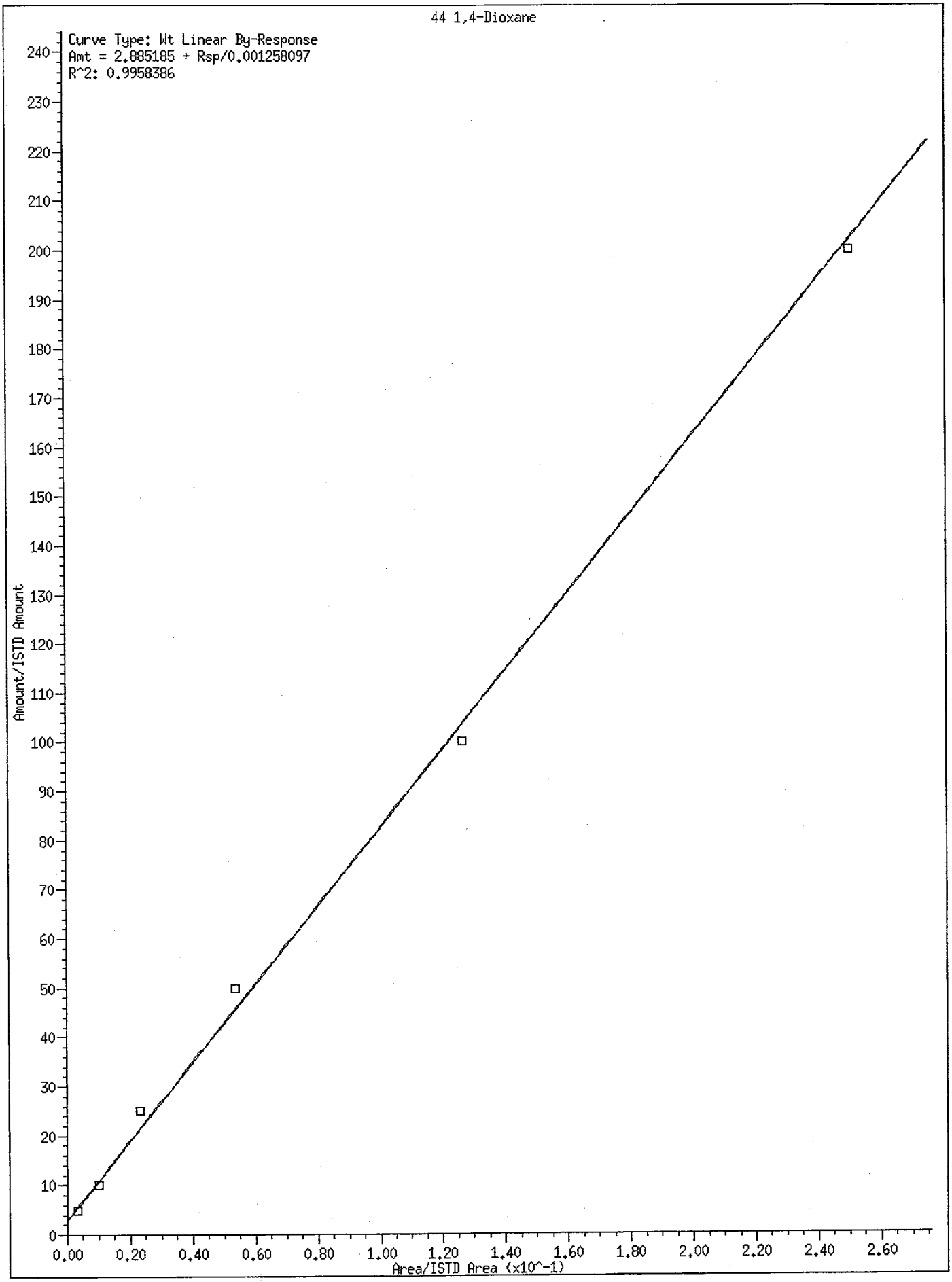

11 Bromomethane
Curve Type: Quadratic By-Response
Amt = 0.0512924 + 12.57894*Rsp + 0.421125*Rsp^2
R^2: 0.9912166
Amount/ISTD Amount
Area/ISTD Area (x10^-1)

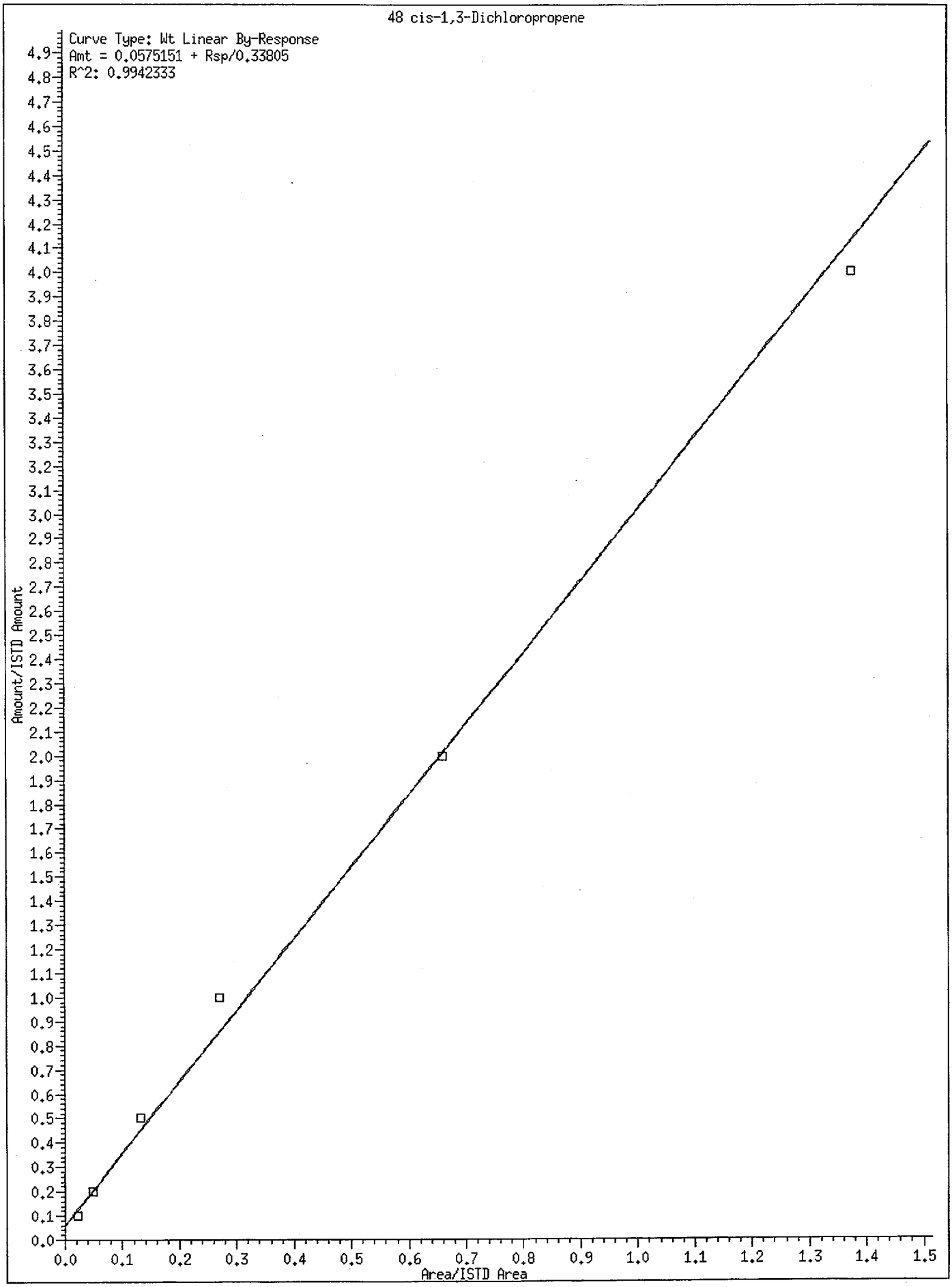

12 Chloroethane
Curve Type: Quadratic By-Response
Amt = 0.0282899 + 8.14942*Rsp + 1.705382*Rsp^2
R^2: 0.9925580
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80

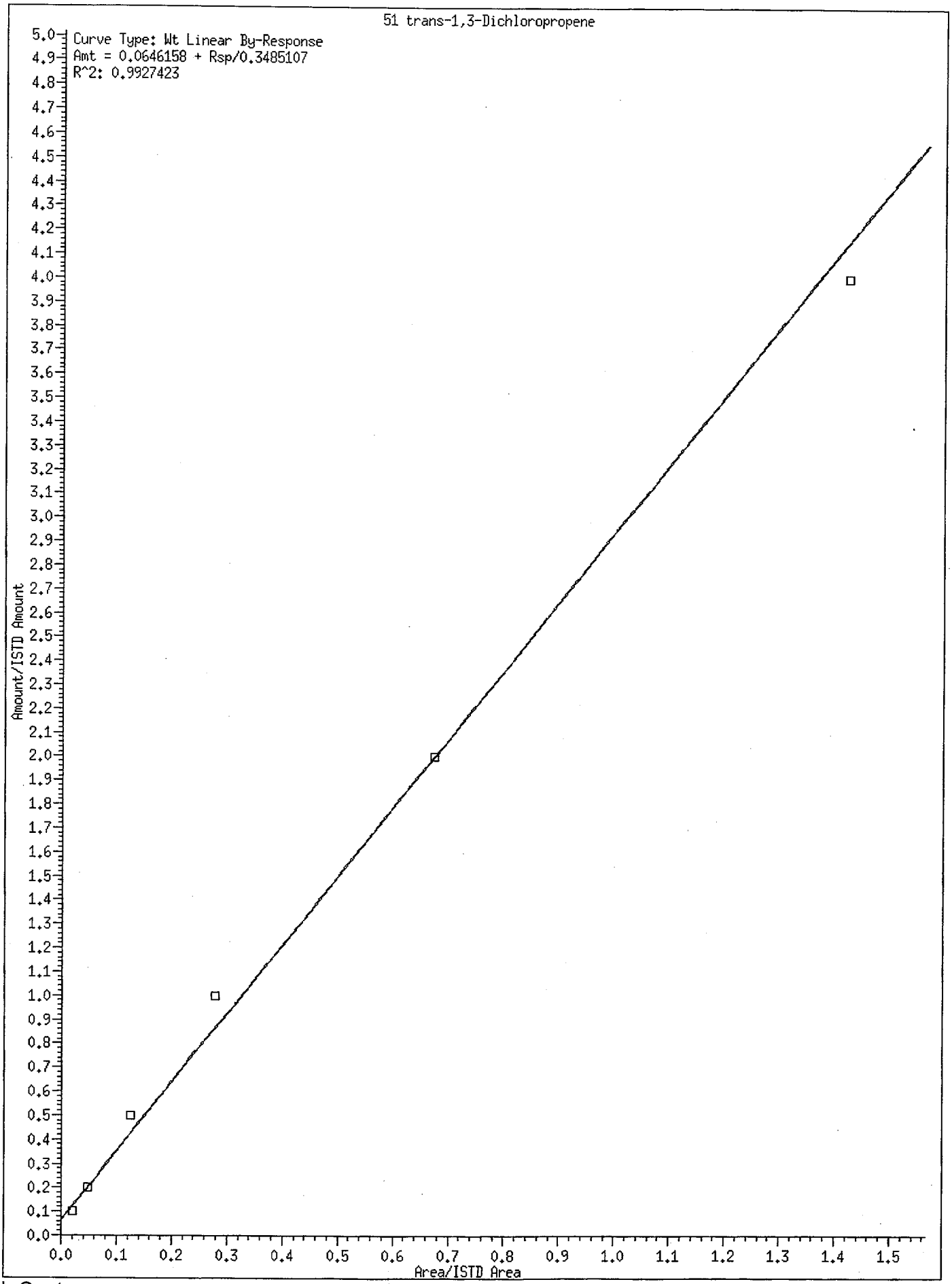

15 Acrolein
Curve Type: Wt Linear By-Response
Amt = 0.6451997 + Rsp/0.03123067
R^2: 0.9931605
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4

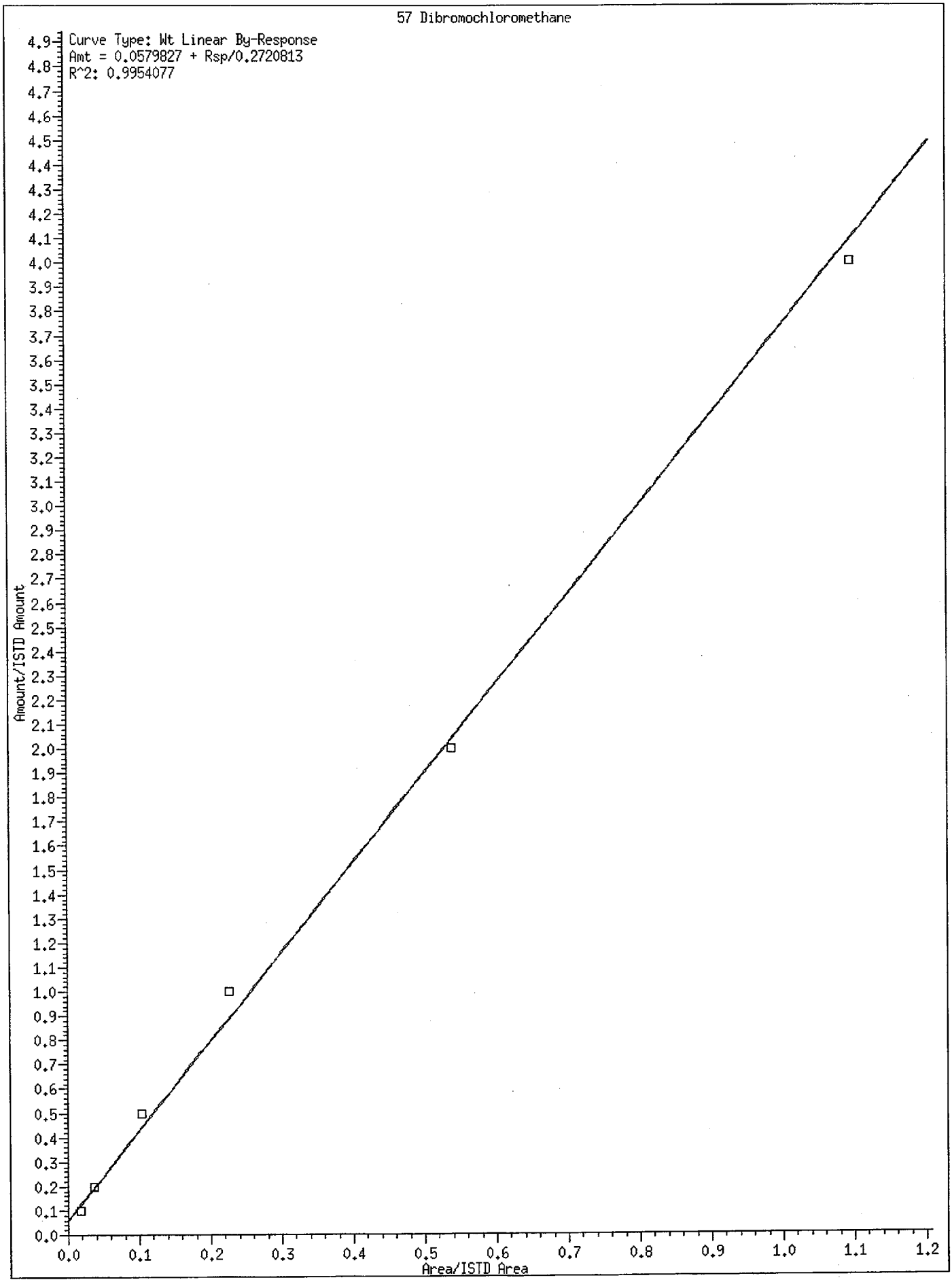

22 Acetonitrile
Curve Type: Quadratic By-Response
Amt = 1.556798 + 39.87842*Rsp + 4.0673*Rsp^2
R^2: 0.9954006
Amount/ISTD Amount
Area/ISTD Area (x10^-1)

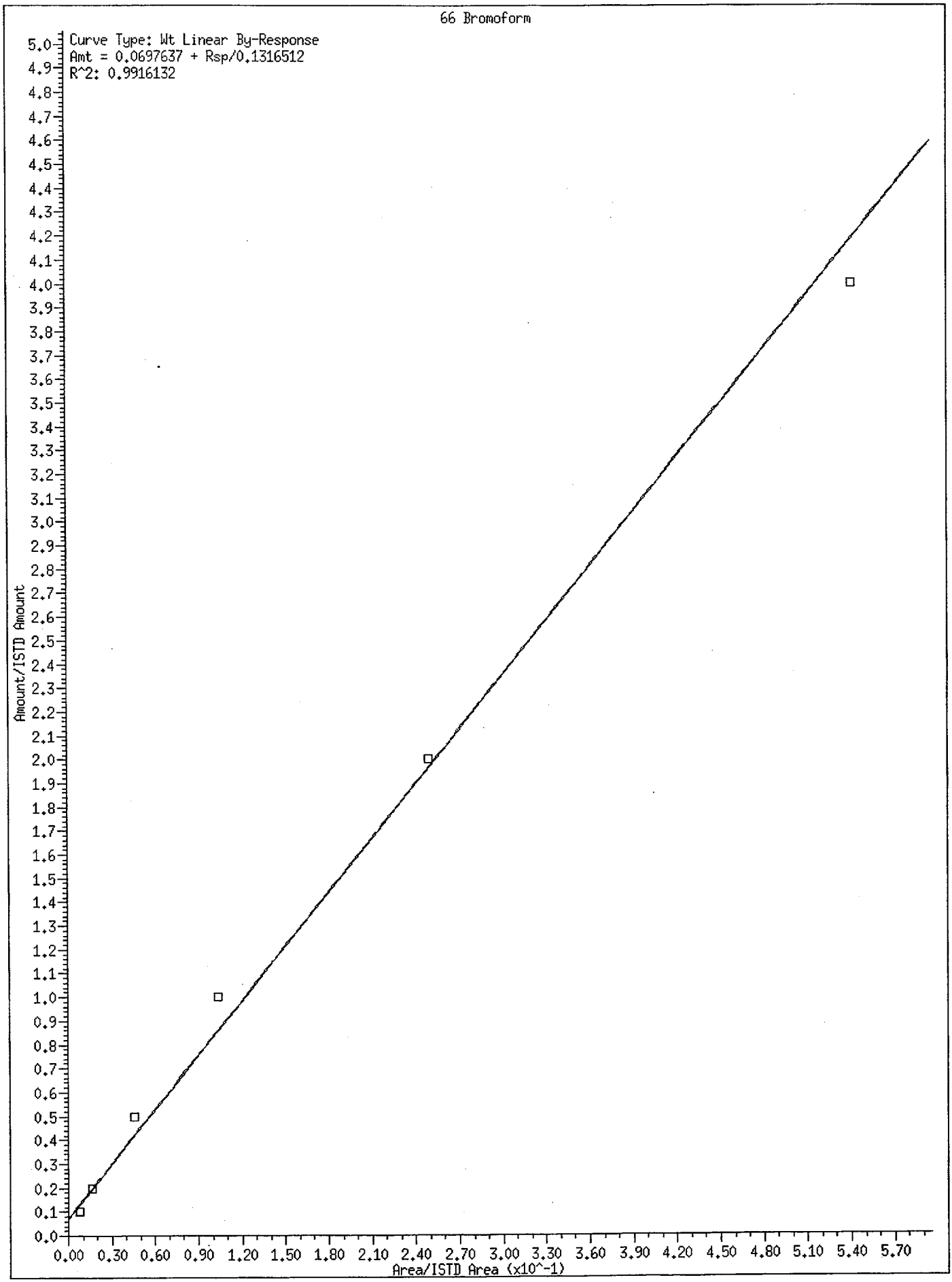

29 tert-Butyl Alcohol
Curve Type: Quadratic By-Response
Amt = 3.517776 + 72.34014*Rsp + -4.320669*Rsp^2
R^2: 0.9939793
Amount/ISTD Amount
Area/ISTD Area
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
64
66
68
70
72
74
76
78
80
82
84
86
88
90
92
94
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2

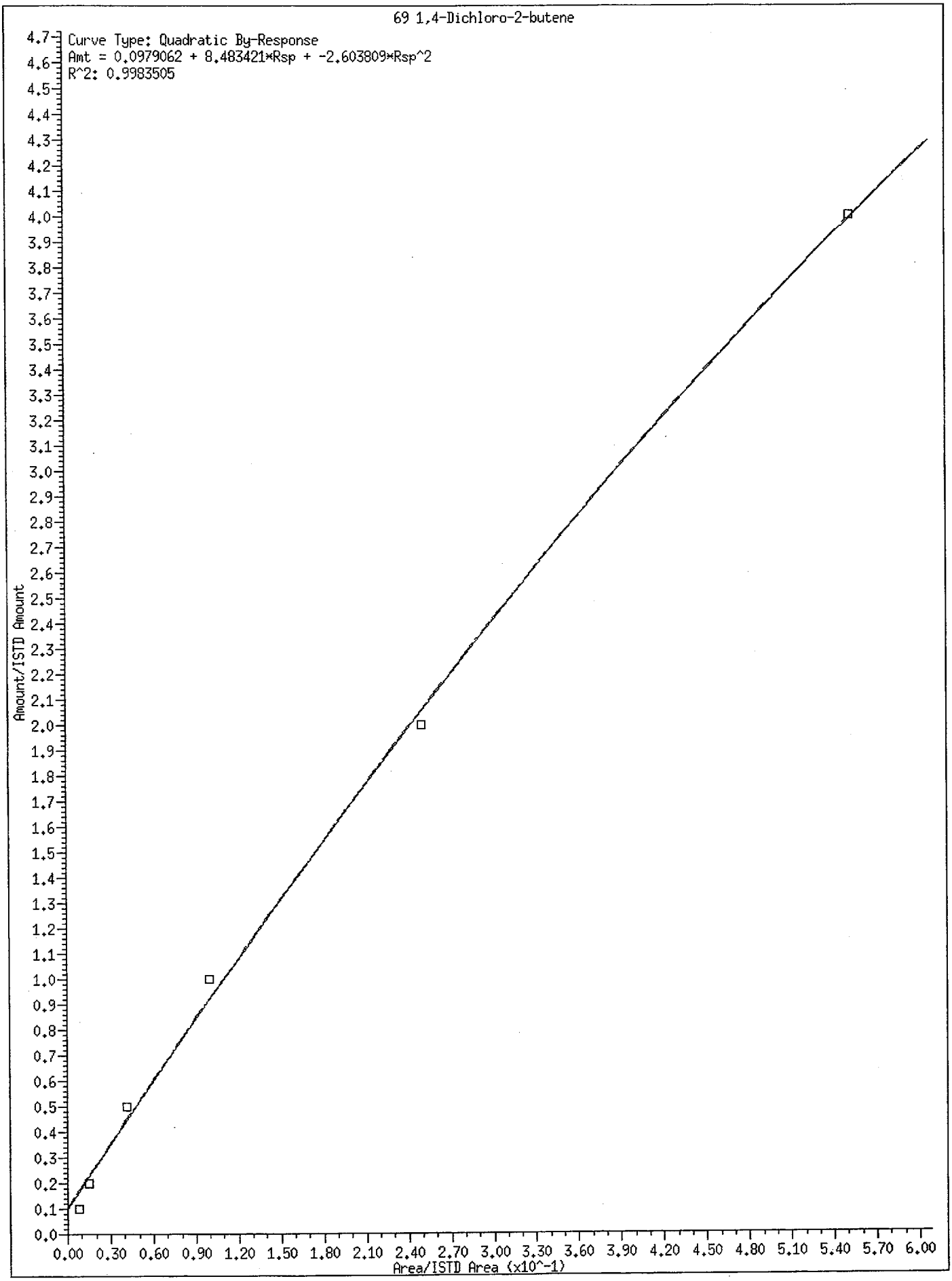

44 1,4-Dioxane
Curve Type: Wt Linear By-Response
Amt = 2.885185 + Rsp/0.001258097
R^2: 0.9958386
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
1.60
1.80
2.00
2.20
2.40
2.60

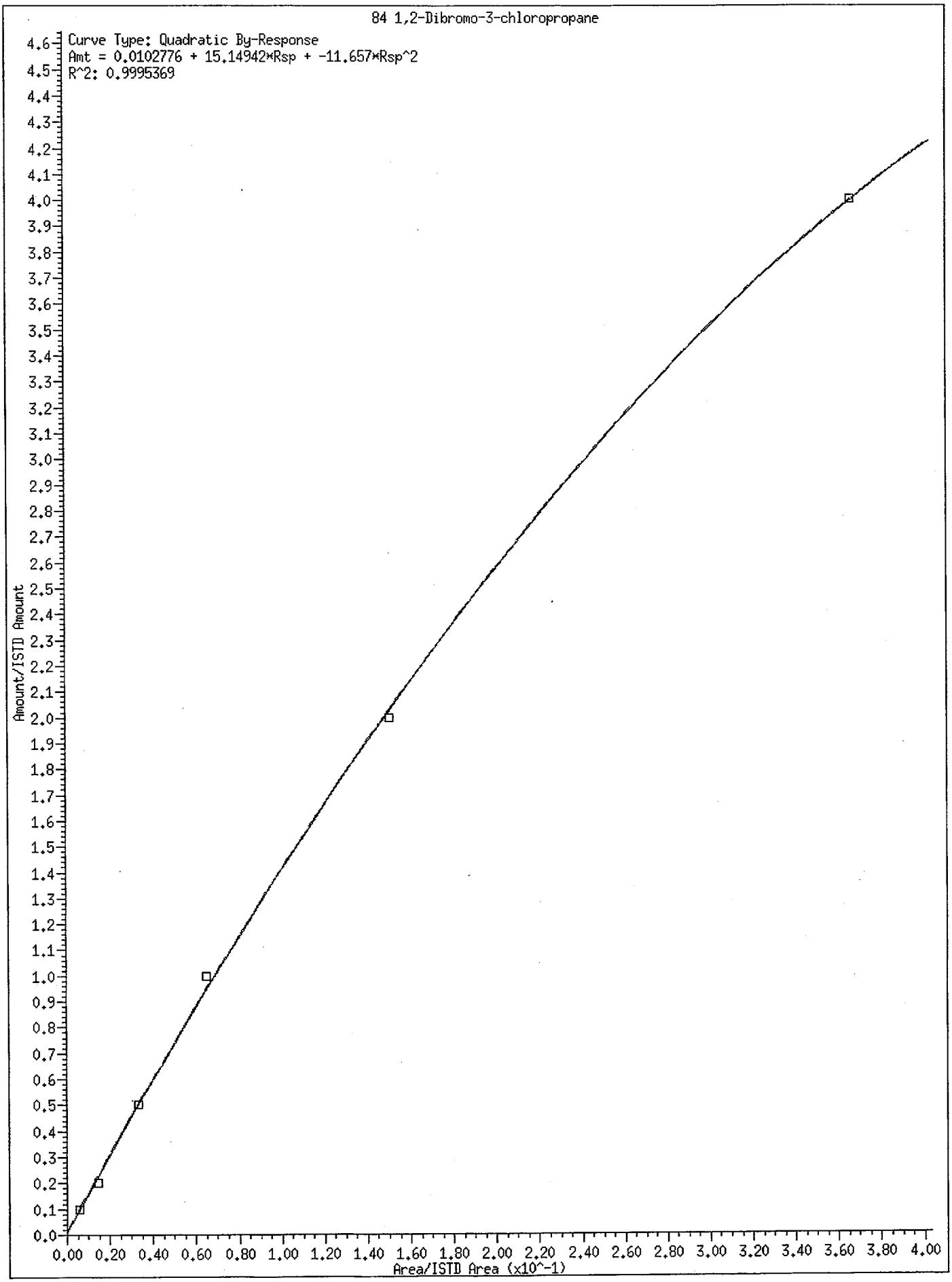

48 cis-1,3-Dichloropropene
Curve Type: Wt Linear By-Response
Amt = 0.0575151 + Rsp/0.33805
R^2: 0.9942333
Amount/ISTD Amount
Area/ISTD Area
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9

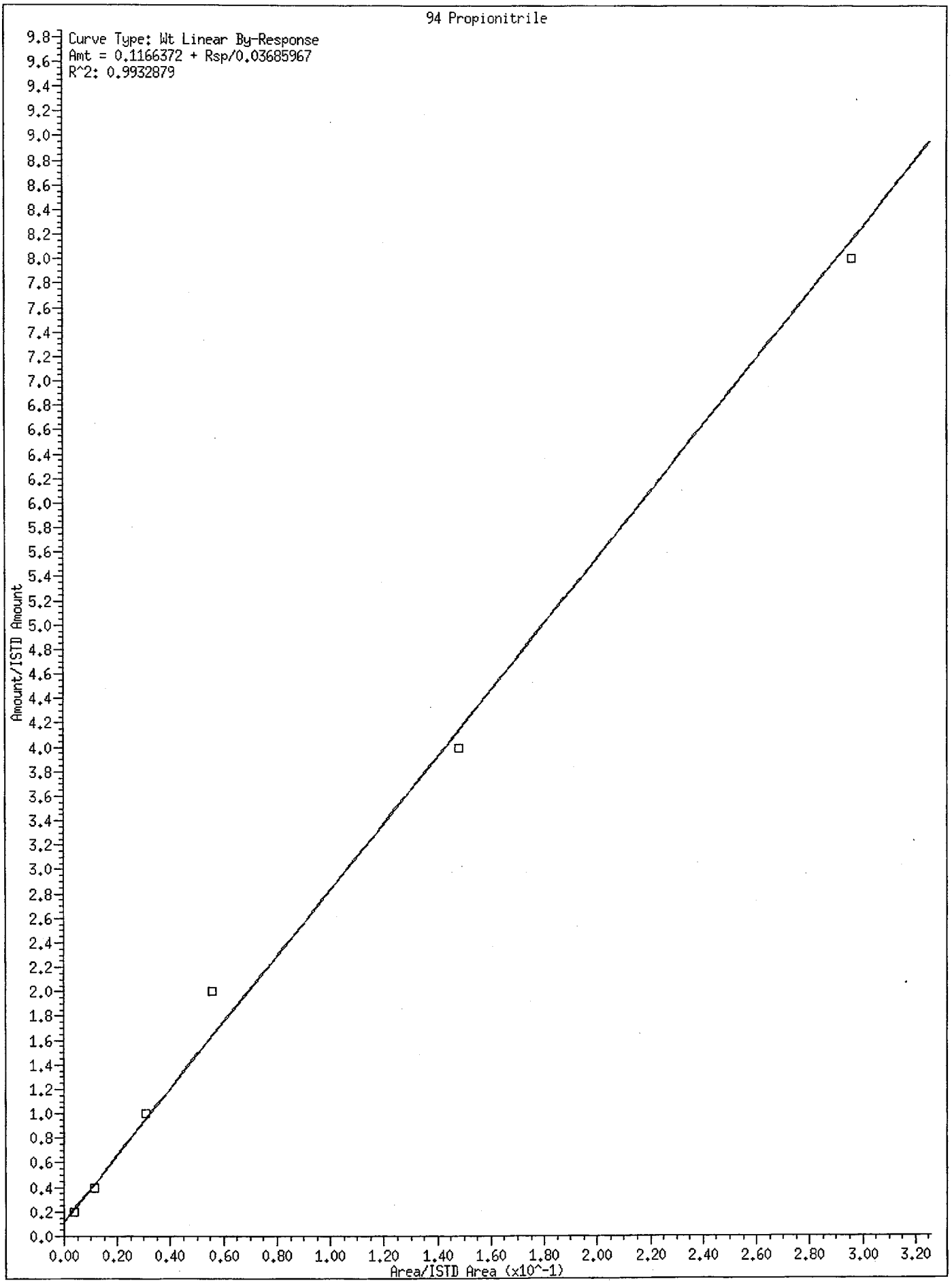

51 trans-1,3-Dichloropropene
Curve Type: Wt Linear By-Response
Amt = 0.0646158 + Rsp/0.3485107
R^2: 0.9927423
Amount/ISTD Amount
Area/ISTD Area
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 5.0

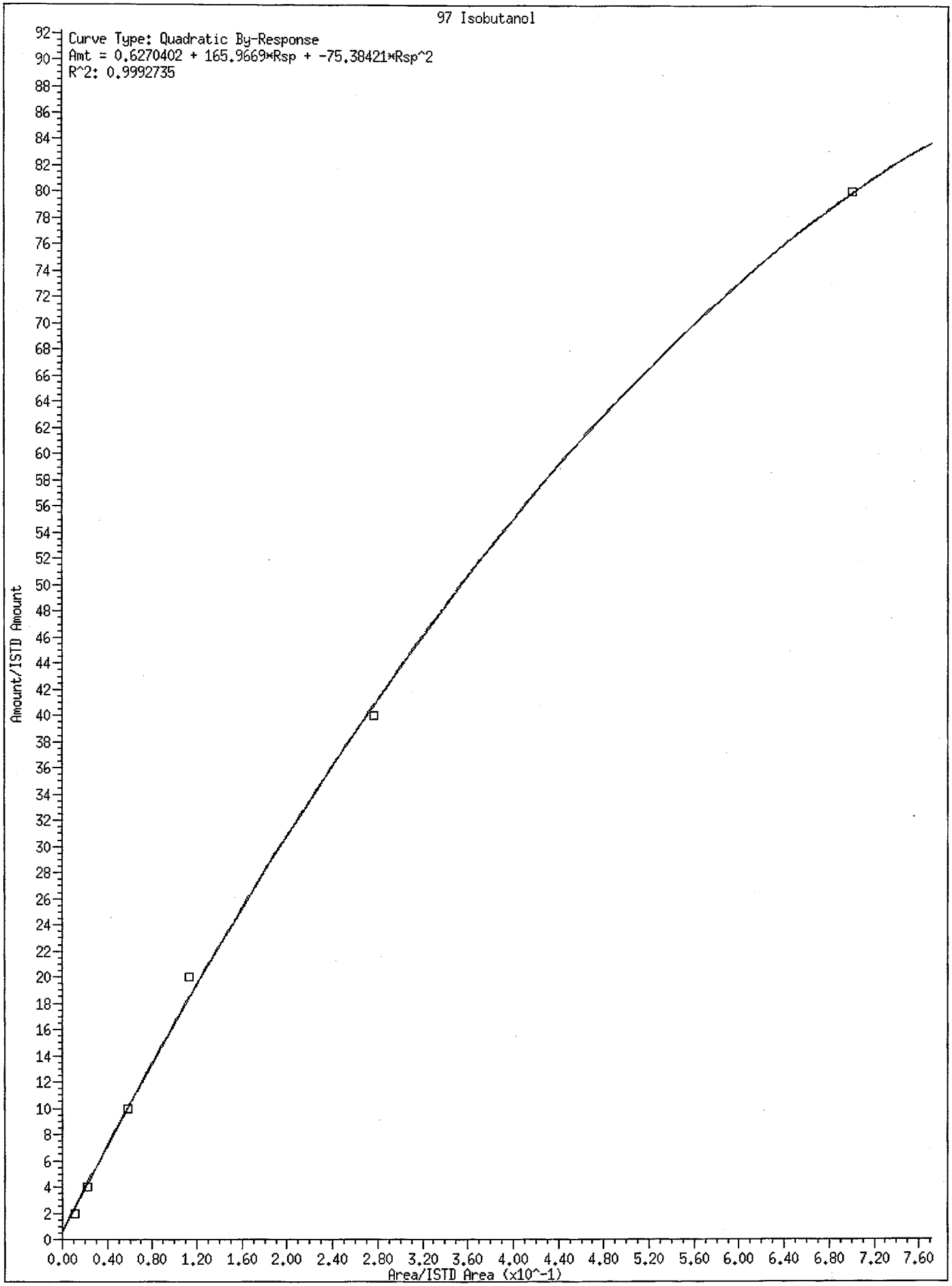

57 Dibromochloromethane
Curve Type: Wt Linear By-Response
Amt = 0.0579827 + Rsp/0.2720813
R^2: 0.9954077
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2

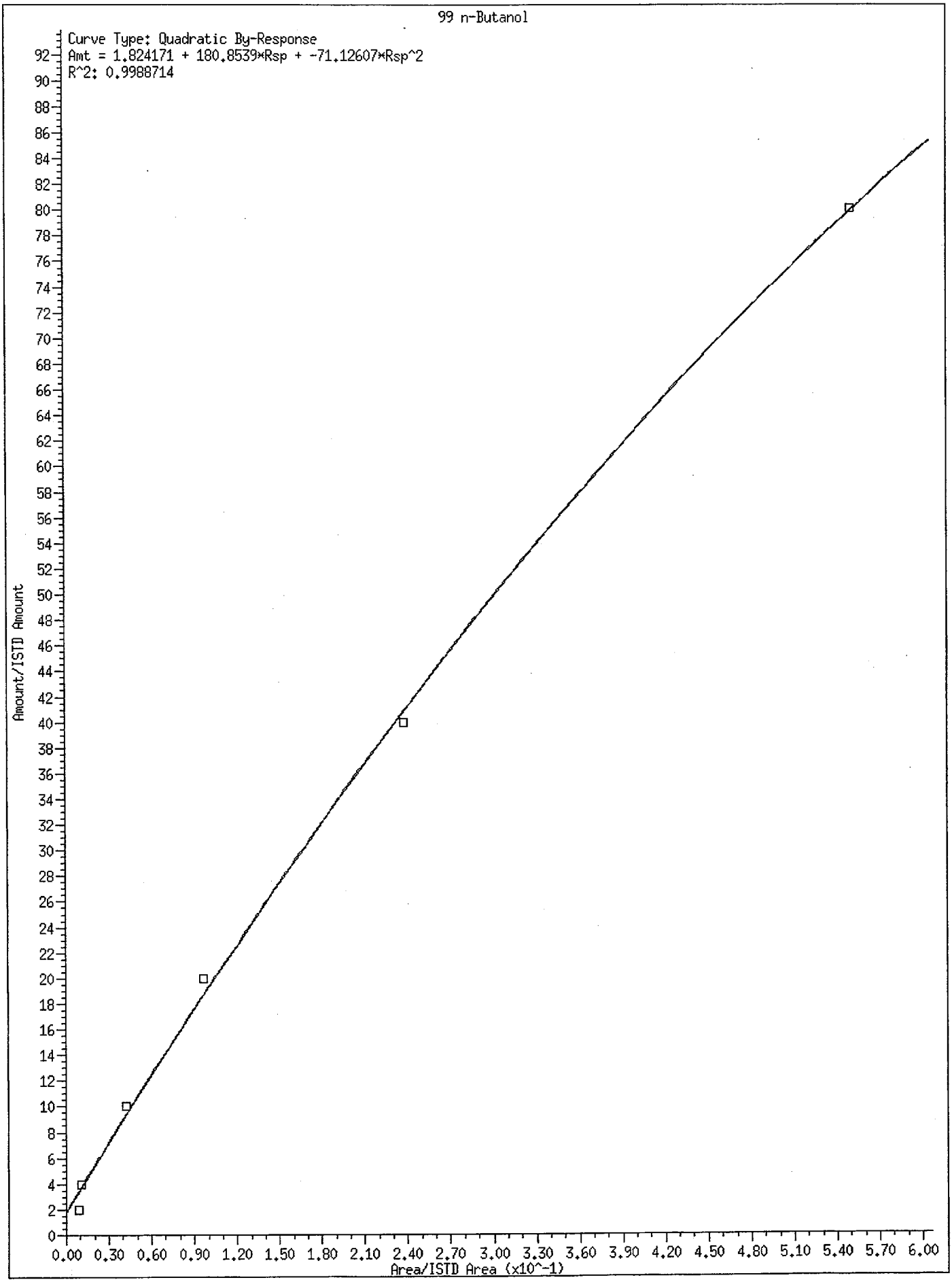

66 Bromoform
Curve Type: Wt Linear By-Response
Amt = 0.0697637 + Rsp/0.1316512
R^2: 0.9916132
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 5.0
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70

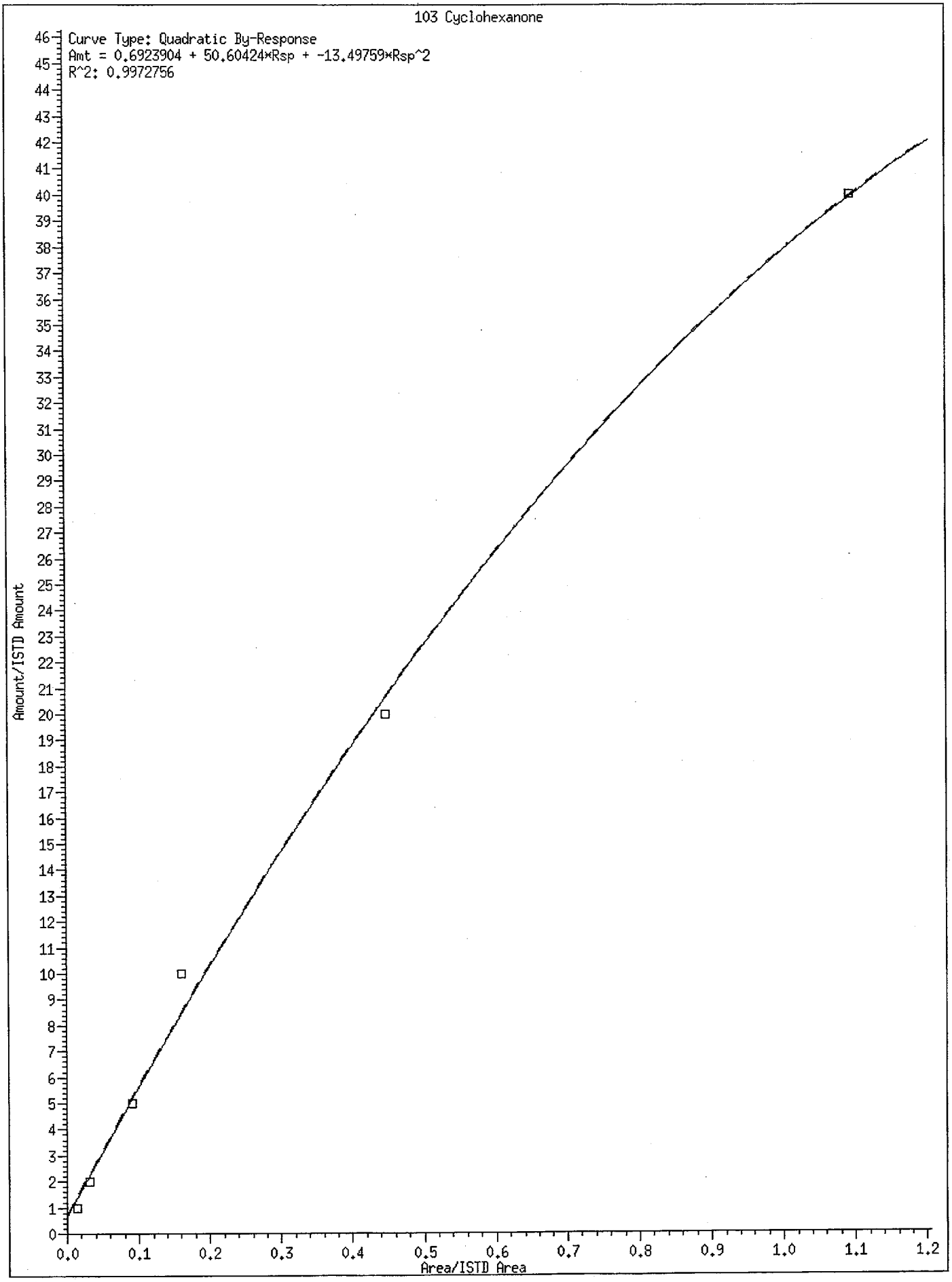

69 1,4-Dichloro-2-butene
Curve Type: Quadratic By-Response
Amt = 0.0979062 + 8.483421*Rsp + -2.603809*Rsp^2
R^2: 0.9983505
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00


84 1,2-Dibromo-3-chloropropane
Curve Type: Quadratic By-Response
Amt = 0.0102776 + 15.14942*Rsp + -11.657*Rsp^2
R^2: 0.9995369
Amount/ISTD Amount
Area/ISTD Area (x10^-1)


94 Propionitrile
Curve Type: Wt Linear By-Response
Amt = 0.1166372 + Rsp/0.03685967
R^2: 0.9932879
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0 7.2 7.4 7.6 7.8 8.0 8.2 8.4 8.6 8.8 9.0 9.2 9.4 9.6 9.8
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00 3.20


97 Isobutanol
Curve Type: Quadratic By-Response
Amt = 0.6270402 + 165.9669*Rsp + -75.38421*Rsp^2
R^2: 0.9992735
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80 3.20 3.60 4.00 4.40 4.80 5.20 5.60 6.00 6.40 6.80 7.20 7.60


99 n-Butanol
Curve Type: Quadratic By-Response
Amt = 1.824171 + 180.8539*Rsp + -71.12607*Rsp^2
R^2: 0.9988714
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00


103 Cyclohexanone
Curve Type: Quadratic By-Response
Amt = 0.6923904 + 50.60424*Rsp + -13.49759*Rsp^2
R^2: 0.9972756
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
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33
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35
36
37
38
39
40
41
42
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44
45
46
0.0
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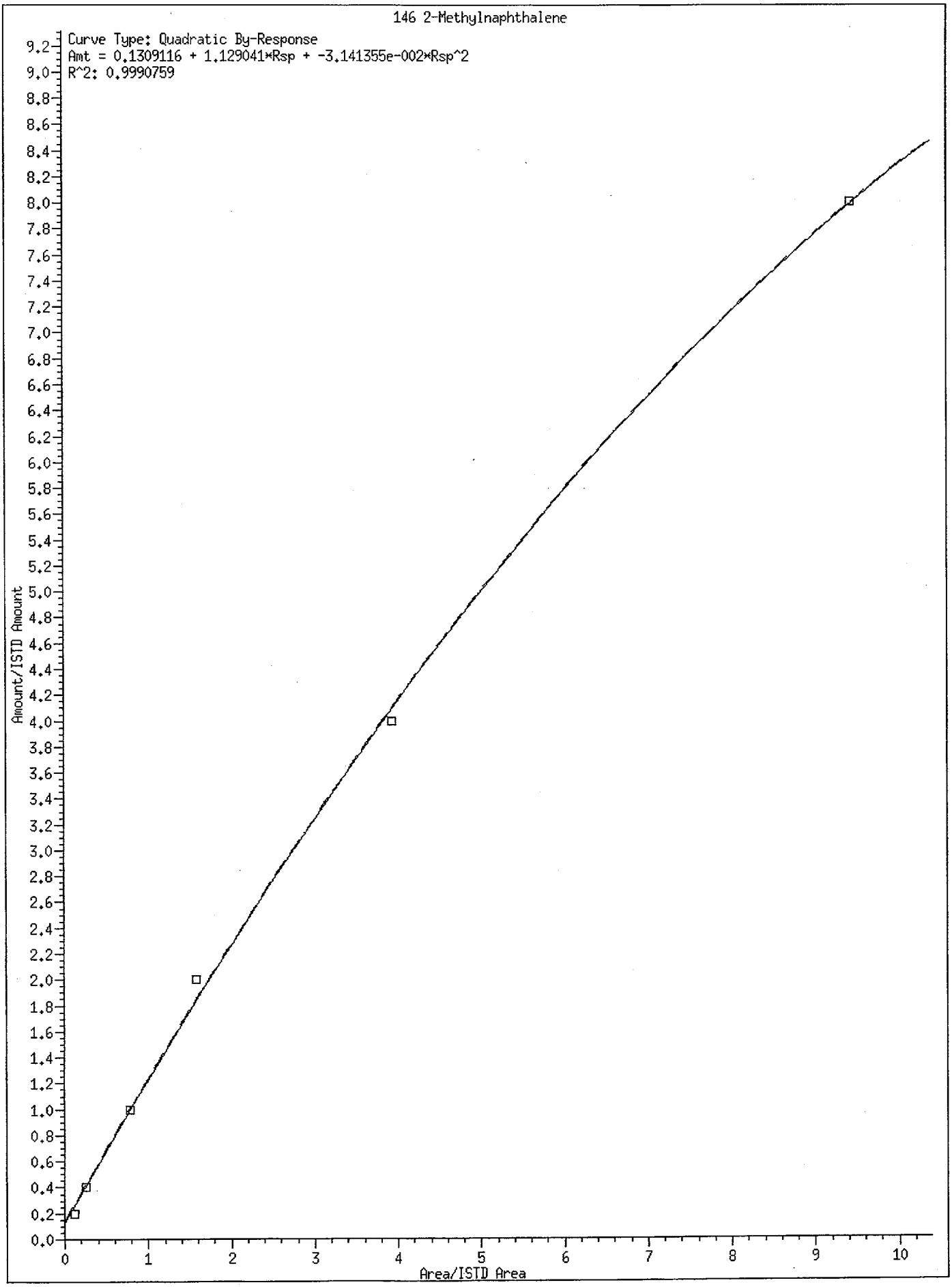
1.2


146 2-Methylnaphthalene
Curve Type: Quadratic By-Response
Amt = 0.1309116 + 1.129041*Rsp + -3.141355e-002*Rsp^2
R^2: 0.9990759
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
7.4
7.6
7.8
8.0
8.2
8.4
8.6
8.8
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9.2
0
1
2
3
4
5
6
7
8
9
10

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4108.D
Report Date: 11-Mar-2011 09:04

TestAmerica North Canton

RECOVERY REPORT

Client Name: Client SDG: SDGa00932
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: ICV
Level: LOW Operator: 43582
Data Type: MS DATA SampleType: METHSPIKE
SpikeList File: DOD-ck.spk Quant Type: ISTD
Sublist File: 4-8260+IX.sub
Method File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\8260LLUX15.m
Misc Info: C10310A-IC,8260LLUX15,,43582,3

	SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	17	1,1-Dichloroethene	10.000	9.406	94.06	45-155
	42	Trichloroethene	10.000	9.330	93.30	45-155
	59	Chlorobenzene	10.000	9.128	91.28	45-155
	50	Toluene	10.000	9.366	93.66	45-155
	41	Benzene	10.000	9.048	90.48	45-155
	16	Acetone	20.000	17.016	85.08	45-155
	20	Carbon Disulfide	10.000	10.842	108.42	45-155
	9	Chloromethane	10.000	10.035	100.35	45-155
	11	Bromomethane	10.000	10.694	106.94	45-155
	10	Vinyl Chloride	10.000	8.834	88.34	45-155
	12	Chloroethane	10.000	10.924	109.24	45-155
	21	Methylene Chloride	10.000	9.301	93.01	45-155
	28	1,1-Dichloroethane	10.000	9.483	94.83	45-155
M	31	1,2-Dichloroethene	20.000	18.812	94.06	45-155
	35	Chloroform	10.000	9.606	96.06	45-155
	40	1,2-Dichloroethane	10.000	9.236	92.36	45-155
	30	2-Butanone	20.000	20.216	101.08	45-155
	37	1,1,1-Trichloroeth	10.000	9.579	95.79	45-155
	39	Carbon Tetrachlori	10.000	9.052	90.52	45-155
	46	Bromodichlorometha	10.000	9.321	93.21	45-155
	43	1,2-Dichloropropan	10.000	9.552	95.52	45-155
	48	cis-1,3-Dichloropr	10.000	7.990	79.90	45-155
	54	1,3-Dichloropropan	10.000	9.148	91.48	45-155
	57	Dibromochlorometha	10.000	8.058	80.58	45-155
	53	1,1,2-Trichloroeth	10.000	9.234	92.34	45-155
	51	trans-1,3-Dichloro	10.000	8.286	82.86	45-155
	66	Bromoform	10.000	7.769	77.69	45-155
	49	4-Methyl-2-pentano	20.000	19.651	98.26	45-155
	56	2-Hexanone	20.000	19.936	99.68	45-155
	55	Tetrachloroethene	10.000	9.150	91.50	45-155
	68	1,1,2,2-Tetrachlor	10.000	9.218	92.18	45-155
	61	Ethylbenzene	10.000	9.311	93.11	45-155
	65	Styrene	10.000	9.624	96.24	45-155
M	63	Xylenes (total)	30.000	27.645	92.15	45-155
	32	cis-1,2-dichloroet	10.000	9.394	93.95	45-155
	25	trans-1,2-Dichloro	10.000	9.418	94.18	45-155
	8	Dichlorodifluorome	10.000	6.919	69.19	45-155
	13	Trichlorofluoromet	10.000	11.324	113.24	45-155
	70	1,2,3-Trichloropro	10.000	9.303	93.03	45-155
	18	Freon-113	10.000	9.566	95.66	45-155

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10310A-IC.b\UXC4108.D
Report Date: 11-Mar-2011 09:04

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
24 Methyl tert-butyl	10.000	9.620	96.20	45-155
58 1,2-Dibromoethane	10.000	9.079	90.79	45-155
67 Isopropylbenzene	10.000	9.071	90.71	45-155
80 1,3-Dichlorobenzen	10.000	9.128	91.28	45-155
81 1,4-Dichlorobenzen	10.000	8.899	88.99	45-155
83 1,2-Dichlorobenzen	10.000	8.796	87.96	45-155
84 1,2-Dibromo-3-chlo	10.000	7.911	79.11	45-155
85 1,2,4-Trichloroben	10.000	8.624	86.25	45-155
98 Cyclohexane	10.000	9.152	91.52	45-155
143 Methyl Acetate	10.000	8.700	87.00	45-155
144 Methylcyclohexane	10.000	9.113	91.13	45-155
71 Bromobenzene	10.000	9.422	94.22	45-155
34 Bromochloromethane	10.000	9.480	94.80	45-155
82 n-Butylbenzene	10.000	9.120	91.20	45-155
78 sec-Butylbenzene	10.000	9.138	91.38	45-155
76 tert-Butylbenzene	10.000	9.552	95.52	45-155
73 2-Chlorotoluene	10.000	9.593	95.93	45-155
75 4-Chlorotoluene	10.000	9.282	92.82	45-155
45 Dibromomethane	10.000	9.388	93.88	45-155
33 2,2-Dichloropropan	10.000	8.699	86.99	45-155
38 1,1-Dichloropropen	10.000	9.080	90.80	45-155
86 Hexachlorobutadien	10.000	8.223	82.23	45-155
19 Iodomethane	10.000	11.366	113.66	45-155
92 Isopropyl Ether	10.000	9.619	96.19	45-155
79 4-Isopropyltoluene	10.000	9.520	95.20	45-155
87 Naphthalene	10.000	8.494	84.94	45-155
72 n-Propylbenzene	10.000	9.308	93.08	45-155
60 1,1,1,2-Tetrachlor	10.000	9.614	96.14	45-155
88 1,2,3-Trichloroben	10.000	8.332	83.33	45-155
77 1,2,4-Trimethylben	10.000	9.481	94.81	45-155
74 1,3,5-Trimethylben	10.000	9.420	94.21	45-155
152 Vinyl Acetate-86	10.000	10.850	108.50	45-155
62 m + p-Xylene	20.000	18.376	91.88	45-155
64 Xylene-o	10.000	9.269	92.69	45-155

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 Dibromofluorometha	10.000	10.667	106.67	75-121
$ 5 1,2-Dichloroethane	10.000	10.422	104.22	63-129
$ 6 Toluene-d8	10.000	10.783	107.83	74-115
$ 7 Bromofluorobenzene	10.000	10.811	108.11	66-117

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID: BFB604 BFB Injection Date: 03/11/11

Instrument ID: A3UX15 BFB Injection Time: 0940

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.5
75	30.0 - 60.0% of mass 95	47.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.5 (0.6)1
174	50.0 - 100.0% of mass 95	85.5
175	5.0 - 9.0% of mass 174	6.2 (7.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.3 (95.1)1
177	5.0 - 9.0% of mass 176	5.1 (6.3)2

1-Value is % of mass 174 2-Value is % of mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	50NG-CC	UXC4109	03/11/11	1028
02	VSTD010	50NG-A9CC	UXC4110	03/11/11	1050
03	MFLD5CHK	MFLD51AC	MFLD51AC	03/11/11	1112
04	MFLD5BLK	MFLD51AA	MFLD51AA	03/11/11	1135
05	TB-030311	ME75M1AA	UXC4123	03/11/11	1547
06	MSA-SW38-030	ME7571AA	UXC4124	03/11/11	1610
07	MSA-SW40-030	ME76H1AM	UXC4125	03/11/11	1633
08	MSA-SW41-030	ME76P1AM	UXC4126	03/11/11	1655
09					
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Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\UXC4109.D
Report Date: 11-Mar-2011 11:18

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i
Lab File ID: UXC4109.D
Analysis Type: WATER
Lab Sample ID: 50NG-CC
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\8260LLUX15.m

Injection Date: 11-MAR-2011 10:28
Init. Cal. Date(s): 17-MAY-2010 10-MAR-2011
Init. Cal. Times: 08:17 16:58
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 4 Dibromofluoromethane	0.25794	0.30223	0.30223	0.010	-17.16942	50.00000	Averaged	
$ 5 1,2-Dichloroethane-d4	0.32579	0.37466	0.37466	0.010	-14.99887	50.00000	Averaged	
$ 6 Toluene-d8	1.25303	1.40880	1.40880	0.010	-12.43121	50.00000	Averaged	
$ 7 Bromofluorobenzene	0.39557	0.44421	0.44421	0.010	-12.29554	50.00000	Averaged	
8 Dichlorodifluoromethane	0.16850	0.20654	0.20654	0.010	-22.57487	50.00000	Averaged	
9 Chloromethane	50.00000	63.15556	0.33189	0.100	-26.31112	0.000e+000	Wt Linear	
10 Vinyl Chloride	0.28740	0.30565	0.30565	0.010	-6.35087	20.00000	Averaged	
11 Bromomethane	50.00000	68.44942	0.10439	0.010	-36.89884	0.000e+000	Quadratic	<-
12 Chloroethane	50.00000	65.73189	0.15295	0.010	-31.46379	0.000e+000	Quadratic	<-
13 Trichlorofluoromethane	0.25374	0.36040	0.36040	0.010	-42.03801	50.00000	Averaged	<-
15 Acrolein	500	477	0.02779	0.010	4.56439	0.000e+000	Wt Linear	
16 Acetone	0.07877	0.07712	0.07712	0.010	2.09225	50.00000	Averaged	
17 1,1-Dichloroethene	0.23302	0.25041	0.25041	0.010	-7.46372	20.00000	Averaged	
18 Freon-113	0.16464	0.20379	0.20379	0.010	-23.77726	50.00000	Averaged	
19 Iodomethane	0.41275	0.43301	0.43301	0.010	-4.90807	50.00000	Averaged	
20 Carbon Disulfide	0.53873	0.61964	0.61964	0.010	-15.01779	50.00000	Averaged	
21 Methylene Chloride	0.27797	0.27310	0.27310	0.010	1.75004	50.00000	Averaged	
22 Acetonitrile	500	454	0.01851	0.010	9.22256	0.000e+000	Quadratic	
23 Acrylonitrile	0.09565	0.10142	0.10142	0.010	-6.03379	50.00000	Averaged	
24 Methyl tert-butyl ether	0.60230	0.62645	0.62645	0.010	-4.00996	50.00000	Averaged	
25 trans-1,2-Dichloroethene	0.27406	0.28456	0.28456	0.010	-3.83249	50.00000	Averaged	
26 Hexane	0.06249	0.07237	0.07237	0.010	-15.81029	20.00000	Averaged	
27 Vinyl acetate	0.43311	0.43151	0.43151	0.010	0.36928	50.00000	Averaged	
28 1,1-Dichloroethane	0.53941	0.54278	0.54278	0.100	-0.62516	50.00000	Averaged	
29 tert-Butyl Alcohol	1000	1012	0.01172	0.010	-1.16848	0.000e+000	Quadratic	
30 2-Butanone	0.11075	0.11031	0.11031	0.010	0.39673	50.00000	Averaged	
M 31 1,2-Dichloroethene (total)	0.28426	0.29095	0.29095	0.010	-2.35379	50.00000	Averaged	
32 cis-1,2-dichloroethene	0.29447	0.29735	0.29735	0.010	-0.97759	50.00000	Averaged	
33 2,2-Dichloropropane	0.18727	0.21433	0.21433	0.010	-14.44739	50.00000	Averaged	
34 Bromochloromethane	0.14529	0.14876	0.14876	0.010	-2.39108	50.00000	Averaged	
35 Chloroform	0.45280	0.46255	0.46255	0.010	-2.15194	20.00000	Averaged	
36 Tetrahydrofuran	0.08132	0.08336	0.08336	0.010	-2.50779	50.00000	Averaged	
37 1,1,1-Trichloroethane	0.30848	0.34147	0.34147	0.010	-10.69697	50.00000	Averaged	
38 1,1-Dichloropropene	0.36311	0.38638	0.38638	0.010	-6.40824	50.00000	Averaged	
39 Carbon Tetrachloride	0.26798	0.32103	0.32103	0.010	-19.79517	50.00000	Averaged	
40 1,2-Dichloroethane	0.44381	0.42876	0.42876	0.010	3.39054	50.00000	Averaged	
41 Benzene	1.08489	1.05946	1.05946	0.010	2.34410	50.00000	Averaged	
42 Trichloroethene	0.31110	0.31055	0.31055	0.010	0.17544	50.00000	Averaged	
43 1,2-Dichloropropane	0.28784	0.28912	0.28912	0.010	-0.44456	20.00000	Averaged	
44 1,4-Dioxane	2500	3443	0.00166	0.010	-37.73644	0.000e+000	Wt Linear	<-
45 Dibromomethane	0.14314	0.14280	0.14280	0.010	0.23309	50.00000	Averaged	
46 Bromodichloromethane	0.26273	0.27626	0.27626	0.010	-5.15261	50.00000	Averaged	
47 2-Chloroethyl vinyl ether	0.12687	0.12889	0.12889	0.010	-1.59608	50.00000	Averaged	

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\UXC4109.D
Report Date: 11-Mar-2011 11:18

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 11-MAR-2011 10:28
Lab File ID: UXC4109.D Init. Cal. Date(s): 17-MAY-2010 10-MAR-2011
Analysis Type: WATER Init. Cal. Times: 08:17 16:58
Lab Sample ID: 50NG-CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
48 cis-1,3-Dichloropropene	50.00000	46.55277	0.29530	0.010	6.89445	0.000e+000	Wt Linear
49 4-Methyl-2-pentanone	0.21902	0.22453	0.22453	0.010	-2.51664	50.00000	Averaged
50 Toluene	1.48390	1.46663	1.46663	0.010	1.16389	20.00000	Averaged
51 trans-1,3-Dichloropropene	50.00000	46.45815	0.30130	0.010	7.08369	0.000e+000	Wt Linear
52 Ethyl Methacrylate	0.29583	0.30250	0.30250	0.010	-2.25491	50.00000	Averaged
53 1,1,2-Trichloroethane	0.24800	0.23923	0.23923	0.010	3.53570	50.00000	Averaged
54 1,3-Dichloropropane	0.43056	0.41003	0.41003	0.010	4.76723	50.00000	Averaged
55 Tetrachloroethene	0.30540	0.31284	0.31284	0.010	-2.43650	50.00000	Averaged
56 2-Hexanone	0.19277	0.19250	0.19250	0.010	0.13941	50.00000	Averaged
57 Dibromochloromethane	50.00000	46.63997	0.23802	0.010	6.72006	0.000e+000	Wt Linear
58 1,2-Dibromoethane	0.23543	0.23560	0.23560	0.010	-0.07354	50.00000	Averaged
59 Chlorobenzene	0.96203	0.92616	0.92616	0.300	3.72859	50.00000	Averaged
60 1,1,1,2-Tetrachloroethane	0.27197	0.29000	0.29000	0.010	-6.62972	50.00000	Averaged
61 Ethylbenzene	0.50279	0.49314	0.49314	0.010	1.92023	20.00000	Averaged
62 m + p-Xylene	0.63155	0.61324	0.61324	0.010	2.90000	50.00000	Averaged
M 63 Xylenes (total)	0.62055	0.60465	0.60465	0.010	2.56254	50.00000	Averaged
64 Xylene-o	0.59856	0.58748	0.58748	0.010	1.85043	50.00000	Averaged
65 Styrene	0.89244	0.88460	0.88460	0.010	0.87865	50.00000	Averaged
66 Bromoform	50.00000	45.94325	0.11179	0.100	8.11349	0.000e+000	Wt Linear
67 Isopropylbenzene	1.51091	1.47710	1.47710	0.010	2.23814	50.00000	Averaged
68 1,1,2,2-Tetrachloroethane	0.50566	0.51843	0.51843	0.300	-2.52447	50.00000	Averaged
69 1,4-Dichloro-2-butene	50.00000	57.19160	0.12835	0.010	-14.38321	0.000e+000	Quadratic
70 1,2,3-Trichloropropane	0.18566	0.18144	0.18144	0.010	2.27137	50.00000	Averaged
71 Bromobenzene	0.73729	0.73422	0.73422	0.010	0.41678	50.00000	Averaged
72 n-Propylbenzene	0.79988	0.80741	0.80741	0.010	-0.94199	50.00000	Averaged
73 2-Chlorotoluene	0.71824	0.72337	0.72337	0.010	-0.71468	50.00000	Averaged
74 1,3,5-Trimethylbenzene	2.27458	2.23568	2.23568	0.010	1.71058	50.00000	Averaged
75 4-Chlorotoluene	0.75095	0.72872	0.72872	0.010	2.96089	50.00000	Averaged
76 tert-Butylbenzene	2.04930	2.06082	2.06082	0.010	-0.56216	50.00000	Averaged
77 1,2,4-Trimethylbenzene	2.26285	2.22479	2.22479	0.010	1.68180	50.00000	Averaged
78 sec-Butylbenzene	2.72888	2.73313	2.73313	0.010	-0.15548	50.00000	Averaged
79 4-Isopropyltoluene	2.31150	2.29035	2.29035	0.010	0.91495	50.00000	Averaged
80 1,3-Dichlorobenzene	1.37646	1.30266	1.30266	0.010	5.36163	50.00000	Averaged
81 1,4-Dichlorobenzene	1.41726	1.38008	1.38008	0.010	2.62386	50.00000	Averaged
82 n-Butylbenzene	1.89791	1.86858	1.86858	0.010	1.54583	50.00000	Averaged
83 1,2-Dichlorobenzene	1.28722	1.19815	1.19815	0.010	6.91949	50.00000	Averaged
84 1,2-Dibromo-3-chloropropane	50.00000	52.61120	0.07286	0.010	-5.22239	0.000e+000	Quadratic
85 1,2,4-Trichlorobenzene	0.82953	0.73458	0.73458	0.010	11.44631	50.00000	Averaged
86 Hexachlorobutadiene	0.30716	0.30227	0.30227	0.010	1.59134	50.00000	Averaged
87 Naphthalene	1.78001	1.73296	1.73296	0.010	2.64330	50.00000	Averaged
88 1,2,3-Trichlorobenzene	0.73573	0.66562	0.66562	0.010	9.52934	50.00000	Averaged
98 Cyclohexane	0.56088	0.66847	0.66847	0.010	-19.18205	50.00000	Averaged
143 Methyl Acetate	0.20978	0.22101	0.22101	0.010	-5.35364	50.00000	Averaged

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\UXC4109.D
Report Date: 11-Mar-2011 11:18

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 11-MAR-2011 10:28
Lab File ID: UXC4109.D Init. Cal. Date(s): 17-MAY-2010 10-MAR-2011
Analysis Type: WATER Init. Cal. Times: 08:17 16:58
Lab Sample ID: 50NG-CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
144 Methylcyclohexane	0.41570	0.50044	0.50044	0.010	-20.38527	50.00000	Averaged
141 1,3,5-Trichlorobenzene	0.87470	0.78781	0.78781	0.010	9.93414	50.00000	Averaged
152 Vinyl Acetate-86	0.03194	0.03243	0.03243	0.010	-1.52106	50.00000	Averaged

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\UXC4110.D
Report Date: 11-Mar-2011 11:18

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a3ux15.i Injection Date: 11-MAR-2011 10:50
Lab File ID: UXC4110.D Init. Cal. Date(s): 17-MAY-2010 10-MAR-2011
Analysis Type: WATER Init. Cal. Times: 08:17 16:58
Lab Sample ID: 50NG-A9CC Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\8260LLUX15.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
114 Dichlorofluoromethane	0.24677	0.27706	0.27706	0.010	-12.27127	50.00000	Averaged	
89 Ethyl Ether	0.31600	0.31691	0.31691	0.010	-0.28768	50.00000	Averaged	
91 3-Chloropropene	0.10935	0.12215	0.12215	0.010	-11.71038	50.00000	Averaged	
92 Isopropyl Ether	0.23504	0.23482	0.23482	0.010	0.09374	50.00000	Averaged	
93 2-Chloro-1,3-butadiene	0.56221	0.55845	0.55845	0.010	0.66997	50.00000	Averaged	
94 Propionitrile	100	92.97390	0.03212	0.010	7.02610	0.000e+000	Wt Linear	
95 Ethyl Acetate	0.22086	0.23170	0.23170	0.010	-4.90723	50.00000	Averaged	
96 Methacrylonitrile	0.17089	0.16467	0.16467	0.010	3.63855	50.00000	Averaged	
97 Isobutanol	1000	1003	0.00620	0.010	-0.28398	0.000e+000	Quadratic	<-
99 n-Butanol	1000	918	0.00475	0.010	8.17397	0.000e+000	Quadratic	<-
103 Cyclohexanone	500	585	0.02320	0.010	-17.03883	0.000e+000	Quadratic	
100 Methyl Methacrylate	0.21153	0.21712	0.21712	0.010	-2.64295	50.00000	Averaged	
101 2-Nitropropane	0.03213	0.03609	0.03609	0.010	-12.33792	50.00000	Averaged	
146 2-Methylnaphthalene	100	110	0.96707	0.010	-9.85586	0.000e+000	Quadratic	
155 tert-Butyl Ethyl Ether	0.82050	0.84534	0.84534	0.010	-3.02835	50.00000	Averaged	
156 tert-Amyl Methyl Ether	0.49014	0.51716	0.51716	0.010	-5.51201	50.00000	Averaged	
157 1,2,3-Trimethylbezene	2.11383	2.15418	2.15418	0.010	-1.90925	50.00000	Averaged	
154 n-Heptane	0.38884	0.39312	0.39312	0.010	-1.09993	50.00000	Averaged	
158 n-Butyl Acetate	0.27166	0.30078	0.30078	0.010	-10.71818	50.00000	Averaged	

SW846 8260B METHOD BLANK SUMMARY

BLANK WORKORDER NO.: MFLD51AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN SDG Number:

Lab File ID: MFLD51AA. Lot Number: A1C040534

Date Analyzed: 03/11/11 Time Analyzed: 11:35

Matrix: WATER Date Extracted:03/11/11

GC Column: DB624 ID: .18 Extraction Method: 5030B

Instrument ID: UX15 Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	TB-030311	ME75M1AA	UXC4123.D	03/11/11	15:47
02	MSA-SW38-030311	ME7571AA	UXC4124.D	03/11/11	16:10
03	MSA-SW40-030311	ME76H1AM	UXC4125.D	03/11/11	16:33
04	MSA-SW41-030311	ME76P1AM	UXC4126.D	03/11/11	16:55
05	INTRA-LAB QC	ME91H1AA	UXC4120.D	03/11/11	14:40
06	LAB MS/MSD	ME91H1AC S	UXC4135.D	03/11/11	20:17
07	LAB MS/MSD	ME91H1AD D	UXC4136.D	03/11/11	20:39
08	CHECK SAMPLE	MFLD51AC C	MFLD51AC.	03/11/11	11:12
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COMMENTS:

FORM IV

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A1C040534 **Work Order #...:** MFLD51AA **Matrix.....:** WATER
MB Lot-Sample #: A1C140000-129

Prep Date.....: 03/11/11 **Final Wgt/Vol..:** 5 mL
Analysis Date..: 03/11/11 **Prep Batch #...:** 1073129
Dilution Factor: 1 **Initial Wgt/Vol:** 5 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	5.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro-benzene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
o-Xylene	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/L	SW846 8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: A1C040534 **Work Order #...:** MFLD51AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B
Xylenes (total)	ND	2.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	5.0	ug/L	SW846 8260B
tert-Butyl alcohol	ND	20	ug/L	SW846 8260B
1,2,3-Trimethylbenzene	ND	5.0	ug/L	SW846 8260B
Diisopropyl Ether (DIPE)	ND	5.0	ug/L	SW846 8260B
Ethyl-t-Butyl Ether (ETBE	ND	5.0	ug/L	SW846 8260B
Tert-amyl methyl ether (T	ND	5.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(75 - 121)
1,2-Dichloroethane-d4	108	(63 - 129)
Toluene-d8	111	(74 - 115)
4-Bromofluorobenzene	108	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: A1C040534 **Work Order #...:** MFLD51AC **Matrix.....:** WATER
LCS Lot-Sample#: A1C140000-129
Prep Date.....: 03/11/11 **Analysis Date..:** 03/11/11
Prep Batch #...: 1073129
Dilution Factor: 1 **Final Wgt/Vol..:** 5 mL
Initial Wgt/Vol: 5 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**91**	**(83 - 112)**	**SW846 8260B**
Chlorobenzene	**90**	**(85 - 110)**	**SW846 8260B**
1,1-Dichloroethene	**95**	**(78 - 131)**	**SW846 8260B**
Toluene	**91**	**(84 - 111)**	**SW846 8260B**
Trichloroethene	**93**	**(76 - 117)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	109	(75 - 121)
1,2-Dichloroethane-d4	107	(63 - 129)
Toluene-d8	109	(74 - 115)
4-Bromofluorobenzene	113	(66 - 117)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No:

Matrix Spike ID: LAB MS/MSD

Lot #: A1C070454 WO #: ME91H1AC
BATCH: 1073129

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENT. (ug/L)	MS CONCENT. (ug/L)	MS % REC	LIMITS REC	QUAL
1,1-Dichloroethene	1700	ND	1500	91	74 - 135	
Trichloroethene	1700	ND	1500	92	66 - 120	
Benzene	1700	4600	6300	105	72 - 121	
Toluene	1700	ND	1500	90	78 - 114	
Chlorobenzene	1700	ND	1500	89	80 - 110	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

SW846 8260B MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No:

Matrix Spike ID: LAB MS/MSD

Lot #: A1C070454 WO #: ME91H1AD
BATCH: 1073129

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENT. (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
1,1-Dichloroethene	1700	1500	90	0.95	30	74- 135	
Trichloroethene	1700	1500	90	1.8	30	66- 120	
Benzene	1700	6300	104	0.30	30	72- 121	
Toluene	1700	1500	90	0.34	30	78- 114	
Chlorobenzene	1700	1500	89	0.19	30	80- 110	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID (Standard): UXC4109 Date Analyzed: 03/11/11

Instrument ID: A3UX15 Time Analyzed: 1028

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 AREA #	RT	IS2 (CBZ) AREA #	RT	IS3 (DCB) AREA #	RT
	12 HOUR STD	1667834	4.74	1302346	7.39	642822	9.59
	UPPER LIMIT	3335668	5.24	2604692	7.89	1285644	10.09
	LOWER LIMIT	833917	4.24	651173	6.89	321411	9.09
	EPA SAMPLE NO.						
01	MFLD5CHK	1729957	4.74	1377643	7.39	723964	9.59
02	MFLD5BLK	1764181	4.74	1340929	7.39	659970	9.59
03	TB-030311	1563018	4.74	1168304	7.39	579437	9.59
04	MSA-SW38-030	1621950	4.74	1238628	7.39	636874	9.59
05	MSA-SW40-030	1866347	4.74	1481350	7.39	727674	9.59
06	MSA-SW41-030	1637645	4.74	1251602	7.39	650347	9.59
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IS1 = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4

UPPER LIMIT = +100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE_____ OF_____

CLIENT Lockheed		JOB NUMBER	
SUBJECT VOC			
BASED ON 8260B		DRAWING NUMBER	
BY Ed Hadley	CHECKED BY	APPROVED BY	DATE

MSA-SW38-030311

Vinyl Chloride = 140 ug/L

$$\frac{1668223 \times 50 \text{ ng} \times 1}{1621950 \times 0.2874 \times 1.25 \text{ mL}} = 143.1 \text{ ug/L}$$

Data File: \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\UXC4124.D
Report Date: 14-Mar-2011 11:04

TestAmerica North Canton

VOLATILE REPORT SW-846 Method 8260A/B

Data file : \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\UXC4124.D
Lab Smp Id: ME7571AA Client Smp ID: MSA-SW38-030311
Inj Date : 11-MAR-2011 16:10
Operator : 43582 Inst ID: a3ux15.i
Smp Info : ME7571AA,1.25ML TO 5ML
Misc Info : C10311A,8260LLUX15,,43582
Comment :
Method : \\cansvr11\dd\chem\MSV\a3ux15.i\C10311A.b\8260LLUX15.m
Meth Date : 11-Mar-2011 11:18 evansl Quant Type: ISTD
Cal Date : 10-MAR-2011 16:58 Cal File: UXC4107.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 4-8260+IX.sub
Target Version: 4.14
Processing Host: CANPMSV30

Concentration Formula: Amt * DF * 1/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1.250	Sample volume
Va	100.000	Injection Volume
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
* 1	Fluorobenzene	96	4.741	4.741	(1.000)	1621950	50.0000	
* 2	Chlorobenzene-d5	117	7.386	7.386	(1.000)	1238628	50.0000	
* 3	1,4-Dichlorobenzene-d4	152	9.591	9.592	(1.000)	636874	50.0000	
$ 4	Dibromofluoromethane	113	4.184	4.184	(0.882)	426308	50.9487	40.759
$ 5	1,2-Dichloroethane-d4	65	4.469	4.457	(0.942)	579335	54.8179	43.854
$ 6	Toluene-d8	98	6.093	6.093	(0.825)	1665958	53.6698	42.936
$ 7	Bromofluorobenzene	95	8.477	8.477	(1.148)	522894	53.3605	42.688
8	Dichlorodifluoromethane	85	Compound Not Detected.					
9	Chloromethane	50	Compound Not Detected.					
10	Vinyl Chloride	62	1.409	1.397	(0.297)	1668223	178.939	143.15
11	Bromomethane	94	Compound Not Detected.					
12	Chloroethane	64	Compound Not Detected.					
13	Trichlorofluoromethane	101	Compound Not Detected.					
15	Acrolein	56	Compound Not Detected.					
16	Acetone	43	Compound Not Detected.					
17	1,1-Dichloroethene	96	2.334	2.334	(0.492)	13680	1.80978	1.448
18	Freon-113	151	Compound Not Detected.					
19	Iodomethane	142	Compound Not Detected.					
20	Carbon Disulfide	76	Compound Not Detected.					
21	Methylene Chloride	84	2.737	2.725	(0.577)	9093	1.00844	0.8067

SW846 8270C SURROGATE RECOVERY

Lab Name: TestAmerica Laboratories, Inc. Client: Tetra Tech NUS, Inc

Lab Code: TALCAN SDG No:

Lot #: A1C040534

Extraction: XXI51QLLB

	CLIENT ID.	SRG01	SRG02	SRG03	SRG04	SRG05	SRG06	TOT OUT
01	MSA-SW38-030311	53	51	69				00
02	MSA-SW40-030311	50	50	50				00
03	MSA-SW41-030311	49	50	65				00
04	METHOD BLK. ME8KH1AA	50	51	67				00
05	LCS ME8KH1AC	67	68	81	75	73	70	00
06	LCSD ME8KH1AD	61	63	73	69	67	66	00

SURROGATES		QC LIMITS
SRG01	= Nitrobenzene-d5	(27-111)
SRG02	= 2-Fluorobiphenyl	(28-110)
SRG03	= Terphenyl-d14	(37-119)
SRG04	= Phenol-d5	(10-110)
SRG05	= 2-Fluorophenol	(10-110)
SRG06	= 2,4,6-Tribromophenol	(22-120)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID: 2DF0307 DFTPP Injection Date: 03/07/11

Instrument ID: A4AG2 DFTPP Injection Time: 1146

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	45.4
68	Less than 2.0% of mass 69	0.4 (1.0)1
69	Mass 69 relative abundance	45.2
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	25.0 - 75.0% of mass 198	56.8
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	24.3
365	Greater than 0.75% of mass 198	4.11
441	Present, but less than mass 443	10.6
442	40.0 - 110.0% of mass 198	65.0
443	15.0 - 24.0% of mass 442	11.9 (18.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD009	L9	2SHHH0307	03/07/11	1203
02	SSTD008	L8	2SHH0307	03/07/11	1220
03	SSTD007	L7	2SH0307	03/07/11	1237
04	SSTD006	L6	2SMH0307	03/07/11	1254
05	SSTD005	L5	2SMM0307	03/07/11	1311
06	SSTD004	L4	2SM0307	03/07/11	1328
07	SSTD003	L3	2SML0307	03/07/11	1345
08	SSTD002	L2	2SL0307	03/07/11	1402
09	SSTD001	L1	2SLL0307	03/07/11	1419
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TestAmerica North Canton

INITIAL CALIBRATION DATA

OKMW
3/8/11

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2SLL0307.D
Level 2: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TL0307.D
Level 3: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TML0307.D
Level 4: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TM0307.D
Level 5: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TMM0307.D
Level 6: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TMH0307.D
Level 7: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TH0308.D
Level 8: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2THH0307.D
Level 9: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2THHH0307.D

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
198 1,4-Dioxane	+++++	0.61953	0.62885	0.62001	0.58532	0.59900			
	0.60343	0.66055	0.64566				0.62029	3.995	<-
7 N-Nitrosomorpholine	+++++	0.94554	0.91448	0.89415	0.90128	0.92298			
	1.04304	1.03435	0.99728				0.95664	6.267	<-
8 Ethyl methanesulfonate	+++++	1.07398	1.05420	1.03145	1.02975	1.07253			
	1.21798	1.19430	1.17620				1.10630	6.957	<-
9 Pyridine	+++++	1.62229	1.65158	1.66093	1.64587	1.67068			
	1.71945	1.87051	1.85139				1.71159	5.630	<-
10 N-Nitrosodimethylamine	+++++	1.03315	1.02771	1.01796	0.98728	0.97388			
	1.00524	1.08379	1.05228				1.02266	3.449	<-
11 Ethyl methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
12 3-Chloropropionitrile	+++++	0.93382	0.93680	0.87656	0.87018	0.85485			
	0.83258	0.88388	0.87255				0.88265	4.091	<-
13 Malononitrile	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

OK RW
3/8/11

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
14 2-Picoline	+++++	1.52584	1.45149	1.48426	1.49242	1.56222			
	1.76332	1.73802	1.70259				1.59002	7.862	<-
15 N-Nitrosomethylethylamine	+++++	0.69610	0.67902	0.67088	0.68035	0.70326			
	0.79843	0.77623	0.76883				0.72164	7.064	<-
16 Methyl methanesulfonate	+++++	0.88334	0.84082	0.82099	0.82916	0.86625			
	0.96713	0.95690	0.92440				0.88612	6.466	<-
18 1,3-Dichloro-2-propanol	+++++	1.44556	1.43152	1.44057	1.43705	1.51011			
	1.71584	1.67676	1.62982				1.53590	7.767	<-
19 N-Nitrosodiethylamine	+++++	0.69589	0.66969	0.66582	0.67407	0.69981			
	0.80527	0.78499	0.77467				0.72128	7.953	<-
21 Aniline	+++++	2.29166	2.34515	2.38092	2.37285	2.44931			
	2.46080	2.80725	2.74847				2.48205	7.696	<-
22 Phenol	+++++	1.52249	1.65222	1.64693	1.62941	1.61469			
	1.67442	1.79784	1.79396				1.66650	5.506	<-
23 bis(2-Chloroethyl)ether	+++++	1.48870	1.49194	1.37712	1.39439	1.28984			
	1.35360	1.39851	1.40485				1.39987	4.768	
24 2-Chlorophenol	+++++	1.30009	1.31704	1.33116	1.33101	1.32459			
	1.34815	1.49086	1.46253				1.36318	5.265	<-
25 Pentachloroethane	+++++	0.44767	0.48635	0.45101	0.46187	0.48739			
	0.55775	0.55587	0.54956				0.49968	9.523	<-
26 1,3-Dichlorobenzene	+++++	1.47001	1.42550	1.45518	1.41622	1.43287			
	1.41594	1.53244	1.51358				1.45772	3.066	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
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Quant Method : ISTD
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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
27 1,4-Dichlorobenzene	+++++	1.35630	1.41084	1.41972	1.41272	1.41739			
	1.40374	1.53691	1.52169				1.43491	4.304	<-
28 1,2-Dichlorobenzene	+++++	1.39012	1.38955	1.38902	1.35354	1.37435			
	1.35486	1.45512	1.42598				1.39157	2.478	<-
29 Benzyl Alcohol	+++++	0.76478	0.79559	0.84957	0.85358	0.86717			
	0.89528	0.97479	0.97159				0.87154	8.589	<-
30 2-Methylphenol	+++++	1.21759	1.13146	1.16787	1.20760	1.18631			
	1.24392	1.34621	1.34292				1.23048	6.338	<-
31 bis(2-Chloroisopropyl)ether	+++++	2.02541	2.07819	2.00856	2.00234	1.91903			
	1.86905	1.97593	1.92177				1.97503	3.437	<-
32 N-Nitroso-di-n-propylamine	+++++	1.20357	1.21508	1.22182	1.23829	1.19078			
	1.21582	1.27281	1.24927				1.22593	2.151	<-
M 195 Cresols, total	+++++	2.39423	2.40574	2.47627	2.48541	2.46675			
	2.57639	2.76757	2.75118				2.54044	5.750	<-
192 4-Methylphenol	+++++	1.17664	1.27428	1.30839	1.27781	1.28044			
	1.33247	1.42136	1.40827				1.30996	6.020	<-
193 3-Methylphenol	+++++	1.07144	1.10715	1.16466	1.22847	1.28347			
	1.50279	1.44071	1.38414				1.27285	12.431	<-
34 Hexachloroethane	+++++	0.60673	0.58205	0.57180	0.58133	0.57290			
	0.56412	0.60534	0.59021				0.58431	2.658	<-
35 Nitrobenzene	0.43525	0.41114	0.39359	0.38314	0.39256	0.39252			
	0.37826	0.41095	0.40511				0.40028	4.346	

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Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
36 N-Nitrosopyrrolidine	+++++	0.67698	0.66911	0.68010	0.69910	0.72252			
	0.83978	0.82499	+++++				0.73037	9.856	<-
37 Acetophenone	+++++	1.92328	1.92851	1.94039	1.89877	1.87865			
	1.95732	2.05937	2.05218				1.95481	3.418	<-
39 o-Toluidine	+++++	2.12241	2.07402	2.06102	2.03867	1.93267			
	1.94034	1.69050	1.50419				1.92048	11.216	<-
40 N-Nitrosopiperidine	+++++	0.17044	0.16705	0.16578	0.16387	0.17188			
	0.19771	0.19540	0.19203				0.17802	8.088	<-
41 Isophorone	+++++	0.71387	0.72008	0.70872	0.74030	0.71197			
	0.73606	0.79154	0.78886				0.73892	4.545	<-
42 2-Nitrophenol	+++++	0.15048	0.15992	0.16818	0.17849	0.17747			
	0.18001	0.19717	0.19128				0.17538	8.818	<-
43 2,4-Dimethylphenol	+++++	0.31874	0.33984	0.33948	0.36131	0.35360			
	0.36241	0.38530	0.37956				0.35503	6.211	<-
44 bis(2-Chloroethoxy)methane	+++++	0.39914	0.39541	0.38300	0.39639	0.39107			
	0.38266	0.41348	0.40579				0.39587	2.672	<-
45 O,O,O-Triethyl phosphorothioa	+++++	0.13269	0.12773	0.13721	0.13435	0.14418			
	0.16514	0.16412	0.16331				0.14609	10.734	<-
46 2,4-Toluenediamene	+++++	0.24475	0.20664	0.27321	0.23131	0.20233			
	0.22102	0.08313	+++++				0.20891	28.942	<-
47 1,3,5-Trichlorobenzene	+++++	0.27920	0.25807	0.26083	0.26614	0.26735			
	0.26350	0.29021	0.28643				0.27147	4.482	<-

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Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
48 2,4-Dichlorophenol	+++++	0.19652	0.22230	0.21886	0.24095	0.24393			
	0.25377	0.27849	0.27679				0.24145	11.792	<-
49 Benzoic Acid	+++++	+++++	0.11245	0.15360	0.21818	0.25939			
	0.27803	0.30022	0.25780				0.22567	30.560	<-
50 1,2,4-Trichlorobenzene	+++++	0.26573	0.26794	0.25623	0.26665	0.26764			
	0.25894	0.28620	0.28389				0.26915	3.974	<-
51 Naphthalene	1.15320	1.02925	1.01139	1.02587	1.04403	1.05167			
	1.08592	1.15949	1.05206				1.06810	5.077	
52 4-Chloroaniline	+++++	0.45358	0.47126	0.46611	0.48695	0.49883			
	0.48822	0.52653	0.53701				0.49106	5.899	<-
53 a,a-Dimethyl-phenethylamine	+++++	0.61812	0.65763	0.75290	0.90493	0.99364			
	1.13470	1.13540	1.10810				0.91318	23.452	<-
54 2,6-Dichlorophenol	+++++	0.21449	0.21374	0.22711	0.23924	0.25395			
	0.29378	0.29045	0.28260				0.25192	13.265	<-
55 Hexachloropropene	+++++	+++++	+++++	0.15228	0.16103	0.17091			
	0.19996	0.19727	0.19768				0.17986	11.716	<-
56 Hexachlorobutadiene	+++++	0.12045	0.12734	0.12508	0.12700	0.13025			
	0.12735	0.14366	0.14114				0.13028	6.146	<-
57 1,2,3-Trichlorobenzene	+++++	0.24778	0.24081	0.24403	0.24676	0.24833			
	0.24350	0.27045	0.26785				0.25119	4.529	<-
58 N-Nitrosodi-n-butylamine	+++++	0.23950	0.24234	0.24129	0.24700	0.25628			
	0.29610	0.28706	0.28689				0.26206	9.110	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
59 4-Chloro-3-Methylphenol	+++++	+++++	0.28175	0.29171	0.29859	0.30076			
	0.31417	0.33711	0.33841				0.30893	7.116	<-
60 p-Phenylene diamine	+++++	+++++	0.19301	0.27099	0.30242	0.27862			
	0.30639	0.25131	+++++				0.26712	15.595	<-
61 Safrole	+++++	0.23561	0.23268	0.23764	0.24152	0.25389			
	0.29825	0.29274	0.29001				0.26029	10.920	<-
62 2-Methylnaphthalene	0.57471	0.55242	0.56023	0.56387	0.57953	0.56964			
	0.59626	0.64617	0.64050				0.58704	5.840	
63 1-Methylnaphthalene	0.70753	0.63045	0.64731	0.63952	0.66765	0.65811			
	0.67330	0.73113	0.72487				0.67554	5.500	
64 Hexachlorocyclopentadiene	+++++	0.21943	0.22481	0.23216	0.27018	0.28181			
	0.28894	0.32896	0.32061				0.27086	15.639	<-
65 1,2,4,5-Tetrachlorobenzene	+++++	0.38331	0.37556	0.36984	0.36878	0.39012			
	0.45274	0.45433	0.44128				0.40449	9.406	<-
66 2,4,6-Trichlorophenol	+++++	0.24892	0.26214	0.26150	0.27872	0.27988			
	0.29092	0.32416	0.32523				0.28393	9.979	<-
67 2,4,5-Trichlorophenol	+++++	0.28160	0.26808	0.27466	0.29939	0.29683			
	0.30775	0.34863	0.33689				0.30173	9.516	<-
68 1,2,3,5-Tetrachlorobenzene	+++++	0.40155	0.37908	0.38461	0.39581	0.40367			
	0.38981	0.43245	0.42596				0.40162	4.722	<-
69 1,4-Dinitrobenzene	+++++	+++++	0.13518	0.14481	0.17318	0.19097			
	0.22058	0.22144	0.21283				0.18557	19.227	<-

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Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD
	7.500 Level 7	10.000 Level 8	12.500 Level 9					
70 2-Chloronaphthalene	1.10979	1.05076	0.99789	1.01446	1.05097	1.04560		
	1.03091	1.12661	1.12498				1.06133	4.503
71 Isosafrole 1	+++++	0.14977	0.15361	0.15351	0.15715	0.16474		
	0.18941	0.19399	0.18760				0.16872	10.954 <-
M 188 Isosafrole, Total	+++++	1.00020	1.01939	1.00390	1.05086	1.10299		
	1.27263	1.28718	1.23999				1.12214	11.101 <-
72 Isosafrole 2	+++++	0.85043	0.86578	0.85040	0.89370	0.93824		
	1.08322	1.09319	1.05240				0.95342	11.134 <-
73 2-Nitroaniline	+++++	0.44878	0.44210	0.44283	0.45188	0.44709		
	0.44886	0.48978	0.47462				0.45574	3.758 <-
74 1,2,3,4-Tetrachlorobenzene	+++++	0.37681	0.35619	0.35376	0.37251	0.37575		
	0.36356	0.39799	0.39203				0.37357	4.230 <-
75 1,4-Naphthoquinone	+++++	+++++	0.34368	0.36239	0.39670	0.40073		
	0.44900	0.45104	0.43036				0.40484	10.265 <-
76 Dimethylphthalate	+++++	1.25258	1.19182	1.22666	1.28386	1.26224		
	1.30685	1.42953	1.41202				1.29569	6.539 <-
77 m-Dinitrobenzene	+++++	+++++	0.17158	0.19203	0.19714	0.21438		
	0.25034	0.24942	0.24015				0.21643	14.345 <-
78 2,6-Dinitrotoluene	+++++	0.24610	0.26106	0.26621	0.28615	0.28775		
	0.28411	0.30830	0.30589				0.28070	7.712 <-
79 Acenaphthylene	1.83270	1.76446	1.75834	1.73442	1.84471	1.87048		
	1.90501	2.06287	1.97121				1.86047	5.760

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
80 1,2-Dinitrobenzene	+++++	0.11899	0.12835	0.12750	0.14446	0.13989			
	0.14050	0.15308	0.15098				0.13797	8.716	<-
81 3-Nitroaniline	+++++	0.32086	0.36150	0.35615	0.37949	0.37817			
	0.38477	0.41658	0.41581				0.37667	8.375	<-
82 Acenaphthene	1.18474	1.15549	1.10240	1.09695	1.15148	1.13552			
	1.15190	1.24659	1.21179				1.15965	4.185	
83 2,4-Dinitrophenol	+++++	+++++	0.09027	0.12915	0.19309	0.21827			
	0.22790	0.25843	0.24838				0.19507	32.290	<-
84 Pentachlorobenzene	+++++	0.31764	0.31345	0.30722	0.30442	0.33508			
	0.38599	0.39384	0.38242				0.34251	11.217	<-
85 4-Nitrophenol	+++++	+++++	0.13855	0.15647	0.20028	0.21102			
	0.19451	0.24403	0.24215				0.19814	20.097	<-
86 Dibenzofuran	1.53384	1.50467	1.43500	1.43905	1.52478	1.51600			
	1.57273	1.75777	1.64583				1.54774	6.560	
87 2,4-Dinitrotoluene	+++++	0.32678	0.35822	0.36214	0.39907	0.38970			
	0.38750	0.41451	0.41709				0.38188	8.088	<-
88 2,3,4,6-Tetrachlorophenol	+++++	+++++	0.10107	0.14159	0.18346	0.21169			
	0.25290	0.24629	0.24342				0.19720	29.555	<-
89 1-Naphthylamine	+++++	1.07655	1.10056	1.05983	1.00446	0.90091			
	+++++	+++++	+++++				1.02846	7.739	<-
90 Zinophos	+++++	0.29484	0.29063	0.29113	0.29402	0.31337			
	0.35382	0.35096	0.33437				0.31539	8.632	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
91 2,3,5,6-Tetrachlorophenol	+++++	+++++	0.18349	0.18658	0.21363	0.21691			
	0.22482	0.25462	0.24839				0.21835	12.555	<-
92 2-Naphthylamine	+++++	1.12198	1.17934	1.09033	1.04974	0.90758			
	0.82135	+++++	+++++				1.02838	13.283	<-
93 Diethylphthalate	+++++	1.32217	1.35290	1.30334	1.38681	1.36790			
	1.41058	1.53790	1.53301				1.40182	6.358	<-
94 Fluorene	1.39606	1.25694	1.22590	1.22957	1.29590	1.29969			
	1.31692	1.43165	1.41895				1.31906	5.996	
95 4-Chlorophenyl-phenylether	+++++	0.50189	0.49259	0.48485	0.49998	0.50896			
	0.50334	0.55186	0.53882				0.51029	4.523	<-
96 4-Nitroaniline	+++++	0.33710	0.38149	0.38316	0.40609	0.41194			
	0.41835	0.45379	0.44835				0.40503	9.391	<-
97 5-Nitro-o-toluidine	+++++	0.30472	0.30673	0.33133	0.33362	0.32647			
	0.34552	0.34556	0.30187				0.32448	5.512	<-
98 4,6-Dinitro-2-methylphenol	+++++	+++++	0.07700	0.09464	0.11679	0.12707			
	0.13305	0.15114	0.15161				0.12161	22.950	<-
99 N-Nitrosodiphenylamine	+++++	0.63313	0.64115	0.65175	0.66103	0.64415			
	0.68495	0.72467	0.74951				0.67379	6.320	<-
100 1,2-Diphenylhydrazine	+++++	0.96539	0.96550	0.95983	0.98544	0.96373			
	0.99394	1.08061	1.03164				0.99326	4.289	<-
101 Diphenylamine	+++++	0.63313	0.64115	0.65175	0.66103	0.64415			
	0.68495	0.72467	0.74951				0.67379	6.320	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
102 Tetraethyl dithiopyrophosphat	+++++	0.08716	0.08218	0.08452	0.08876	0.09206			
	0.10800	0.10925	0.10800				0.09499	12.097	<-
103 Diallate 1	+++++	0.67107	0.65852	0.65816	0.65535	0.65963			
	0.72096	0.69689	+++++				0.67437	3.723	<-
M 189 Diallate, Total	+++++	2.71016	2.70747	2.68617	2.69028	2.74722			
	3.10769	2.97848	2.89672				2.81552	5.670	<-
104 Phorate	+++++	0.16771	0.17866	0.16794	0.17586	0.17977			
	0.20380	0.19688	0.19189				0.18281	7.296	<-
105 1,3,5-Trinitrobenzene	+++++	+++++	0.04152	0.04936	0.06422	0.06767			
	0.08283	0.08747	0.08410				0.06817	26.252	<-
106 4-Bromophenyl-phenylether	+++++	0.16023	0.15028	0.15596	0.16220	0.16200			
	0.16273	0.17999	0.17983				0.16415	6.439	<-
107 Hexachlorobenzene	+++++	0.16410	0.16194	0.16023	0.15881	0.16397			
	0.16225	0.18191	0.18319				0.16705	5.825	
108 Phenacetin	+++++	0.38824	0.39888	0.43043	0.43725	0.46929			
	0.53069	0.52644	0.51458				0.46197	12.333	<-
109 Diallate 2	+++++	0.12589	0.13047	0.12630	0.12870	0.13502			
	0.15296	0.15240	0.15247				0.13803	8.983	<-
110 Dimethoate	+++++	+++++	0.32738	0.32609	0.32319	0.31966			
	0.33460	0.33561	0.30725				0.32483	2.969	<-
111 Pentachlorophenol	+++++	+++++	0.07512	0.09143	0.10841	0.11802			
	0.13371	0.14867	0.14963				0.11786	24.060	<-

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
112 Pentachloronitrobenzene	+++++	0.08212	0.08456	0.08099	0.08563	0.09435			
	0.10939	0.11155	0.11075				0.09492	14.293	<-
113 4-Aminobiphenyl	+++++	0.76155	0.75859	0.73978	0.72388	0.69062			
	0.71847	+++++	+++++				0.73215	3.666	<-
114 Pronamide	+++++	0.33954	0.33755	0.33776	0.36096	0.37276			
	0.43009	0.44014	0.43172				0.38131	11.905	<-
115 Phenanthrene	1.31128	1.10398	1.08209	1.08885	1.12733	1.14113			
	1.21342	1.27999	1.21429				1.17359	7.200	
116 Anthracene	1.27566	1.07417	1.07168	1.09024	1.14164	1.14567			
	1.21851	1.22762	1.15915				1.15604	6.253	
117 Dinoseb	+++++	+++++	0.06493	0.10019	0.13354	0.16216			
	0.20378	0.21276	0.20746				0.15497	37.345	<-
118 Disulfoton	+++++	0.42243	0.42793	0.43129	0.44305	0.45632			
	0.51428	0.50227	0.49187				0.46118	7.905	<-
119 Carbazole	+++++	1.05728	1.05586	1.09315	1.09428	1.11353			
	1.17266	1.31347	1.26380				1.14550	8.422	<-
120 Di-n-Butylphthalate	+++++	1.43410	1.41200	1.40940	1.47819	1.48855			
	1.58969	1.40730	1.26996				1.43615	6.330	<-
121 4-Nitroquinoline 1-oxide	+++++	+++++	0.04092	0.06481	0.09689	0.11720			
	0.14165	0.15236	0.14929				0.10902	39.932	<-
122 Methapyrilene	+++++	0.40921	0.43417	0.45963	0.43790	0.35107			
	0.37842	+++++	+++++				0.41173	9.883	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
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Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
123 Fluoranthene	1.16041	1.00189	1.02723	1.01586	1.05230	1.07737			
	1.12518	1.24720	1.17221				1.09774	7.615	
124 Benzidine	+++++	+++++	0.72435	0.84540	0.88740	0.91049			
	0.96501	1.02253	0.98937				0.90636	11.129	<-
125 Pyrene	1.32959	1.19565	1.20598	1.22408	1.24581	1.25824			
	1.29653	1.43176	1.39681				1.28716	6.518	
126 Aramite 1	+++++	0.07332	0.06864	0.07431	0.08186	0.08718			
	0.09445	0.09865	0.09801				0.08455	13.965	<-
M 191 Aramite, Total	+++++	0.50324	0.47632	0.51112	0.55457	0.58476			
	0.66794	0.67601	0.67415				0.58101	14.232	<-
127 Aramite 2	+++++	0.09200	0.08314	0.08993	0.09911	0.10627			
	0.11339	0.12025	0.11807				0.10277	13.484	<-
128 p-Dimethylamino azobenzene	+++++	0.20208	0.20737	0.20893	0.22779	0.24858			
	0.27391	0.28289	0.27534				0.24086	13.968	<-
129 p-Chlorobenzilate	+++++	0.52128	0.51452	0.51255	0.54739	0.57983			
	0.65344	0.66888	0.63959				0.57968	11.329	<-
130 Famphur 1	+++++	0.43159	0.42092	0.39086	0.28024	0.15102			
	0.05018	+++++	+++++				0.28747	54.836	<-
131 Butylbenzylphthalate	+++++	+++++	+++++	0.71615	0.75912	0.73211			
	0.74459	0.81198	0.78242				0.75773	4.614	<-
132 3,3'-Dimethylbenzidine	+++++	0.55964	0.52782	0.50746	0.44573	0.27094			
	+++++	+++++	+++++				0.46232	24.828	<-

TestAmerica North Canton

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Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
133 3,3'-Dimethoxybenzidine	+++++	0.25261	0.27389	0.27629	0.27784	0.31661			
	0.28895	0.35627	0.30958				0.29401	11.021	<-
134 2-Acetylaminofluorene	+++++	0.47507	0.47495	0.53251	0.57192	0.64873			
	0.69915	0.77340	0.71731				0.61163	18.697	<-
135 3,3'-Dichlorobenzidine	+++++	0.42563	0.42742	0.43358	0.45450	0.45212			
	0.48861	0.53343	0.53198				0.46841	9.499	<-
136 Benzo(a)Anthracene	1.20223	1.01618	0.99037	1.00407	1.02148	1.05297			
	1.08185	1.18941	1.20510				1.08485	8.269	
137 Chrysene	1.02550	0.95018	0.99275	0.93842	0.94914	0.97610			
	1.00998	1.12046	1.10763				1.00780	6.636	
138 4,4'-Methylene bis(o-chloroan	+++++	0.21627	0.21610	0.22233	0.23263	0.24005			
	0.25468	0.28803	0.28058				0.24384	11.551	<-
139 bis(2-ethylhexyl)Phthalate	+++++	1.02103	1.01934	1.10928	1.06242	1.04418			
	1.06853	1.15274	1.11881				1.07454	4.490	<-
140 Di-n-octylphthalate	+++++	1.59336	1.69938	1.75496	1.94101	1.98781			
	2.11054	2.13691	1.99184				1.90198	10.394	<-
141 Benzo(b)fluoranthene	1.17751	1.12616	1.05112	1.09010	1.20785	1.10758			
	1.20318	1.44586	1.53429				1.21596	13.598	
142 Benzo(k)fluoranthene	1.37095	1.19381	1.20222	1.16111	1.17452	1.28278			
	1.33842	1.30607	1.23491				1.25164	6.052	
143 7,12-dimethylbenz[a]anthracen	+++++	0.45909	0.45407	0.45643	0.48952	0.53523			
	0.62307	0.45646	0.47289				0.49334	11.981	<-

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Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
146 Benzo(a)pyrene	1.19338	1.00163	1.01529	1.02593	1.06695	1.10323			
	1.14628	1.26769	1.24705				1.11860	8.992	
148 3-Methylcholanthrene	+++++	0.50409	0.48273	0.48968	0.51320	0.55866			
	0.64443	0.67062	0.66241				0.56573	14.301	<-
149 Indeno(1,2,3-cd)pyrene	1.08469	1.08155	1.09521	1.09990	1.20110	1.17274			
	1.25949	1.38495	1.37084				1.19450	10.069	
150 Dibenz(a,h)anthracene	0.93155	0.86051	0.87534	0.90769	0.97872	0.98418			
	1.06959	1.18589	1.16355				0.99522	12.039	
151 Benzo(g,h,i)perylene	0.84713	0.91082	0.89842	0.90269	0.94377	0.94480			
	1.00279	1.09732	1.09800				0.96064	9.198	
199 3-Picoline	+++++	1.29650	1.30045	1.35956	1.40349	1.45484			
	1.66722	1.63981	1.58670				1.46357	10.224	<-
200 N,N-Dimethylacetamide	+++++	+++++	1.40576	1.35212	1.33302	1.35922			
	1.52495	1.44863	1.38037				1.40058	4.775	<-
201 Quinoline	+++++	0.46272	0.49990	0.50938	0.53765	0.54984			
	0.56940	0.54968	0.57276				0.53142	7.135	<-
202 Diphenyl	+++++	1.15373	1.09922	1.09810	1.15597	1.17205			
	1.18609	1.15966	1.15395				1.14735	2.788	<-

TestAmerica North Canton

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Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
203 Diphenyl ether	+++++	0.58402	0.58099	0.58177	0.60857	0.60145			
	0.61554	0.60702	0.62127				0.60008	2.648	<-
204 6-Methylchrysene	+++++	0.54262	0.55956	0.54499	0.59250	0.61305			
	0.63617	0.64160	0.66418				0.59934	7.809	<-
205 Benzenethiol	+++++	+++++	0.93158	0.83034	0.82171	0.54987			
	0.60956	0.57256	0.59363				0.70132	22.066	<-
207 Indene	+++++	1.83351	1.89234	1.74912	1.74379	1.56264			
	1.64409	1.65456	+++++				1.72572	6.631	<-
208 Dibenz(a,j)acridine	+++++	0.54906	0.57813	0.59947	0.64742	0.68353			
	0.69735	0.72602	0.73104				0.65150	10.635	<-
209 Benzaldehyde	+++++	1.10480	1.08083	1.07482	1.01480	0.84110			
	0.82360	0.39221	+++++				0.90459	28.017	<-
210 Caprolactam	+++++	+++++	0.10446	0.10495	0.12236	0.11795			
	0.12228	0.13161	0.13081				0.11920	9.253	<-
211 1,1'-Biphenyl	+++++	1.43926	1.39627	1.39994	1.47823	1.47892			
	1.47892	1.63631	1.60789				1.48947	5.960	<-
212 Atrazine	+++++	0.17697	0.19886	0.19764	0.20540	0.18867			
	0.20055	0.20073	0.20025				0.19613	4.625	<-
213 Benzothiazole	+++++	0.38346	0.40661	0.39101	0.41698	0.42404			
	0.42671	0.42084	0.43791				0.41345	4.481	<-
214 1,3-Dimethyl-2-Thiourea	+++++	+++++	0.27510	0.27568	0.36024	0.41266			
	0.41409	0.42120	0.43624				0.37074	18.677	<-

TestAmerica North Canton

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Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
215 Phenyl ether	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
216 1,3-Diethyl-2-Thiourea	+++++	+++++	0.25172	0.31837	0.34142	0.37935			
	0.39871	0.39614	0.39968				0.35506	15.590	<-
217 1,3-Dibutyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	
218 1,1,3,3-Tetramethyl-2-Thioure	+++++	0.24141	0.25625	0.26125	0.27860	0.28375			
	0.28540	0.28161	0.28855				0.27210	6.253	<-
219 o-Benzyl Phenol	+++++	0.22097	0.25138	0.25017	0.27238	0.28430			
	0.28218	0.28105	0.28943				0.26648	8.860	<-
220 Diphenyl Thiourea	+++++	+++++	0.05954	0.05103	0.05386	0.08801			
	0.12912	0.14241	0.15251				0.09664	45.562	<-
221 Hexabromobenzene	+++++	+++++	+++++	+++++	0.04747	0.04928			
	0.05183	0.05072	0.05449				0.05076	5.215	
222 Dibenz(a,h)acridine	+++++	0.61392	0.55428	0.60700	0.64170	0.72136			
	0.71504	0.74668	0.75374				0.66922	11.134	<-
223 1,2-bis(2-chloroethoxy)ethane	+++++	0.23848	0.26983	0.25753	0.26767	0.26991			
	0.27302	0.25990	0.26878				0.26314	4.286	<-
224 Acrylamide	+++++	+++++	0.39173	0.40426	0.44388	0.47362			
	0.49672	0.49956	0.50483				0.45923	10.188	<-
225 Methyl parathion	+++++	+++++	0.25705	0.27306	0.28762	0.28790			
	0.29813	0.30399	0.28355				0.28447	5.506	<-

TestAmerica North Canton

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Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat
Curve Type : Average

Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	RRF	% RSD	
	7.500 Level 7	10.000 Level 8	12.500 Level 9						
226 Parathion	+++++	0.14788	0.15418	0.17580	0.18265	0.19675			
	0.21809	0.21953	0.21563				0.18882	15.066	<-
227 Isodrin	+++++	0.14682	0.14852	0.14234	0.14551	0.14341			
	0.16114	0.15683	0.15369				0.14978	4.503	<-
M 229 Famphur,Total	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
230 Famphur 2	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
231 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
232 2-Methylcyclohexanone	+++++	0.84602	0.80648	0.86296	0.83759	0.80718			
	0.95012	0.89664	0.85862				0.85820	5.536	<-
233 3-Methylcyclohexanone	+++++	1.41552	1.39129	1.40184	1.36862	1.35336			
	1.60598	1.50617	1.45654				1.43741	5.831	<-
234 4-Methylcyclohexanone	+++++	1.25855	1.27933	1.28465	1.21750	1.19234			
	1.41395	1.31428	1.26184				1.27780	5.248	<-
235 Tributyl phosphate	+++++	1.59923	1.72628	1.73640	1.73667	1.84491			
	2.20798	2.02490	+++++				1.83948	11.359	<-
236 Phenyl sulfone	+++++	+++++	0.54427	1.26540	0.57437	0.58103			
	0.55456	0.54166	0.55932				0.66009	40.496	<-
237 3,4-Dichloronitrobenzene	+++++	+++++	0.14908	0.16105	0.17235	0.18016			
	0.18368	0.18228	0.18735				0.17371	8.036	<-

TestAmerica North Canton

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Compound	0.05000 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	2.500 Level 5	5.000 Level 6	7.500 Level 7	10.000 Level 8	12.500 Level 9	RRF	% RSD	
238 Bis(2-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
239 Bis(4-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
240 4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
241 2,3-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
242 2,5-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
243 Octachlorostyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
244 Octachlorocyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
245 Catechol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
246 3-methylcatechol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
247 4-methylcatechol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
248 Hydroquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

TestAmerica North Canton

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	7.500 Level 7	10.000 Level 8	12.500 Level 9						
249 Resorcinol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
250 N-methyl-pyrrolidone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
251 N,N-Dimethylformamide	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-
$ 154 Nitrobenzene-d5	0.48637	0.43077	0.43848	0.42754	0.43500	0.43389			
	0.42037	0.42961	0.44091				0.43811	4.359	
$ 155 2-Fluorobiphenyl	1.25848	1.15773	1.15723	1.14865	1.19454	1.21435			
	1.20445	1.31744	1.29845				1.21681	5.105	
$ 156 Terphenyl-d14	0.73938	0.63930	0.66822	0.66448	0.67414	0.68508			
	0.67860	0.74261	0.73789				0.69219	5.491	
$ 157 Phenol-d5	+++++	1.51717	1.58307	1.57807	1.57923	1.56778			
	1.62627	1.73479	1.70679				1.61165	4.588	
$ 158 2-Fluorophenol	+++++	1.16208	1.20250	1.19065	1.19363	1.20726			
	1.23198	1.34314	1.32786				1.23239	5.408	
$ 159 2,4,6-Tribromophenol	+++++	0.09829	0.08976	0.09487	0.10234	0.10817			
	0.11440	0.12507	0.12821				0.10764	13.002	<-
$ 186 2-Chlorophenol-d4	+++++	1.21509	1.20056	1.19153	1.21581	1.21375			
	1.24346	1.33034	1.31976				1.24129	4.341	<-
$ 187 1,2-Dichlorobenzene-d4	+++++	0.87597	0.89980	0.86510	0.86239	0.86021			
	0.84368	0.90552	0.89338				0.87576	2.493	<-

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Calibration File Names:
Level 1: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2SLL0307.D
Level 2: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TL0307.D
Level 3: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TML0307.D
Level 4: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TM0307.D
Level 5: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TMM0307.D
Level 6: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TMH0307.D
Level 7: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2TH0308.D
Level 8: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2THH0307.D
Level 9: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\2THHH0307.D

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
198 1,4-Dioxane	+++++	0.61953	0.62885	0.62001	0.58532	0.59900						
	0.60343	0.66055	0.64566				AVRG		0.62029		3.99521	<-
7 N-Nitrosomorpholine	+++++	0.94554	0.91448	0.89415	0.90128	0.92298						
	1.04304	1.03435	0.99728				AVRG		0.95664		6.26682	<-
8 Ethyl methanesulfonate	+++++	1.07398	1.05420	1.03145	1.02975	1.07253						
	1.21798	1.19430	1.17620				AVRG		1.10630		6.95688	<-

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Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
9 Pyridine	+++++	1.62229	1.65158	1.66093	1.64587	1.67068						
	1.71945	1.87051	1.85139				AVRG		1.71159		5.62987	<-
10 N-Nitrosodimethylamine	+++++	1.03315	1.02771	1.01796	0.98728	0.97388						
	1.00524	1.08379	1.05228				AVRG		1.02266		3.44874	<-
11 Ethyl methacrylate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
12 3-Chloropropionitrile	+++++	0.93382	0.93680	0.87656	0.87018	0.85485						
	0.83258	0.88388	0.87255				AVRG		0.88265		4.09075	<-
13 Malononitrile	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
14 2-Picoline	+++++	1.52584	1.45149	1.48426	1.49242	1.56222						
	1.76332	1.73802	1.70259				AVRG		1.59002		7.86249	<-
15 N-Nitrosomethylethylamine	+++++	0.69610	0.67902	0.67088	0.68035	0.70326						
	0.79843	0.77623	0.76883				AVRG		0.72164		7.06409	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
16 Methyl methanesulfonate	+++++	0.88334	0.84082	0.82099	0.82916	0.86625						
	0.96713	0.95690	0.92440				AVRG		0.88612		6.46573	<-
18 1,3-Dichloro-2-propanol	+++++	1.44556	1.43152	1.44057	1.43705	1.51011						
	1.71584	1.67676	1.62982				AVRG		1.53590		7.76709	<-
19 N-Nitrosodiethylamine	+++++	0.69589	0.66969	0.66582	0.67407	0.69981						
	0.80527	0.78499	0.77467				AVRG		0.72128		7.95322	<-
21 Aniline	+++++	2.29166	2.34515	2.38092	2.37285	2.44931						
	2.46080	2.80725	2.74847				AVRG		2.48205		7.69573	<-
22 Phenol	+++++	1.52249	1.65222	1.64693	1.62941	1.61469						
	1.67442	1.79784	1.79396				AVRG		1.66650		5.50646	<-
23 bis(2-Chloroethyl)ether	+++++	1.48870	1.49194	1.37712	1.39439	1.28984						
	1.35360	1.39851	1.40485				AVRG		1.39987		4.76840	
24 2-Chlorophenol	+++++	1.30009	1.31704	1.33116	1.33101	1.32459						
	1.34815	1.49086	1.46253				AVRG		1.36318		5.26493	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
25 Pentachloroethane	+++++	0.44767	0.48635	0.45101	0.46187	0.48739						
	0.55775	0.55587	0.54956				AVRG		0.49968		9.52276	<-
26 1,3-Dichlorobenzene	+++++	1.47001	1.42550	1.45518	1.41622	1.43287						
	1.41594	1.53244	1.51358				AVRG		1.45772		3.06616	<-
27 1,4-Dichlorobenzene	+++++	1.35630	1.41084	1.41972	1.41272	1.41739						
	1.40374	1.53691	1.52169				AVRG		1.43491		4.30358	<-
28 1,2-Dichlorobenzene	+++++	1.39012	1.38955	1.38902	1.35354	1.37435						
	1.35486	1.45512	1.42598				AVRG		1.39157		2.47829	<-
29 Benzyl Alcohol	+++++	0.76478	0.79559	0.84957	0.85358	0.86717						
	0.89528	0.97479	0.97159				AVRG		0.87154		8.58891	<-
30 2-Methylphenol	+++++	1.21759	1.13146	1.16787	1.20760	1.18631						
	1.24392	1.34621	1.34292				AVRG		1.23048		6.33841	<-
31 bis(2-Chloroisopropyl)ether	+++++	2.02541	2.07819	2.00856	2.00234	1.91903						
	1.86905	1.97593	1.92177				AVRG		1.97503		3.43706	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
32 N-Nitroso-di-n-propylamine	+++++	1.20357	1.21508	1.22182	1.23829	1.19078						
	1.21582	1.27281	1.24927				AVRG		1.22593		2.15095	<-
M 195 Cresols, total	+++++	2.39423	2.40574	2.47627	2.48541	2.46675						
	2.57639	2.76757	2.75118				AVRG		2.54044		5.75047	<-
192 4-Methylphenol	+++++	1.17664	1.27428	1.30839	1.27781	1.28044						
	1.33247	1.42136	1.40827				AVRG		1.30996		6.02030	<-
193 3-Methylphenol	+++++	1.07144	1.10715	1.16466	1.22847	1.28347						
	1.50279	1.44071	1.38414				AVRG		1.27285		12.43063	<-
34 Hexachloroethane	+++++	0.60673	0.58205	0.57180	0.58133	0.57290						
	0.56412	0.60534	0.59021				AVRG		0.58431		2.65790	<-
35 Nitrobenzene	0.43525	0.41114	0.39359	0.38314	0.39256	0.39252						
	0.37826	0.41095	0.40511				AVRG		0.40028		4.34590	
36 N-Nitrosopyrrolidine	+++++	0.67698	0.66911	0.68010	0.69910	0.72252						
	0.83978	0.82499	+++++				AVRG		0.73037		9.85607	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
37 Acetophenone	+++++	1.92328	1.92851	1.94039	1.89877	1.87865						
	1.95732	2.05937	2.05218				AVRG		1.95481		3.41816	<-
39 o-Toluidine	+++++	2.12241	2.07402	2.06102	2.03867	1.93267						
	1.94034	1.69050	1.50419				AVRG		1.92048		11.21641	<-
40 N-Nitrosopiperidine	+++++	0.17044	0.16705	0.16578	0.16387	0.17188						
	0.19771	0.19540	0.19203				AVRG		0.17802		8.08844	<-
41 Isophorone	+++++	0.71387	0.72008	0.70872	0.74030	0.71197						
	0.73606	0.79154	0.78886				AVRG		0.73892		4.54462	<-
42 2-Nitrophenol	+++++	0.15048	0.15992	0.16818	0.17849	0.17747						
	0.18001	0.19717	0.19128				AVRG		0.17538		8.81752	<-
43 2,4-Dimethylphenol	+++++	0.31874	0.33984	0.33948	0.36131	0.35360						
	0.36241	0.38530	0.37956				AVRG		0.35503		6.21118	<-
44 bis(2-Chloroethoxy)methane	+++++	0.39914	0.39541	0.38300	0.39639	0.39107						
	0.38266	0.41348	0.40579				AVRG		0.39587		2.67162	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
45 O,O,O-Triethyl phosphorothioa	+++++	0.13269	0.12773	0.13721	0.13435	0.14418						
	0.16514	0.16412	0.16331				AVRG		0.14609		10.73442	<-
46 2,4-Toluenediamene	+++++	0.24475	0.20664	0.27321	0.23131	0.20233						
	0.22102	+++++	+++++				AVRG		0.22988		11.47460	<-
47 1,3,5-Trichlorobenzene	+++++	0.27920	0.25807	0.26083	0.26614	0.26735						
	0.26350	0.29021	0.28643				AVRG		0.27147		4.48204	<-
48 2,4-Dichlorophenol	+++++	0.19652	0.22230	0.21886	0.24095	0.24393						
	0.25377	0.27849	0.27679				AVRG		0.24145		11.79208	<-
49 Benzoic Acid	+++++	+++++	66292	137625	614543	1314234						
	2293609	3242798	+++++				QUAD	0.35824	3.92110	-0.23715	0.99978	<-
50 1,2,4-Trichlorobenzene	+++++	0.26573	0.26794	0.25623	0.26665	0.26764						
	0.25894	0.28620	0.28389				AVRG		0.26915		3.97378	<-
51 Naphthalene	1.15320	1.02925	1.01139	1.02587	1.04403	1.05167						
	1.08592	1.15949	1.05206				AVRG		1.06810		5.07733	

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
52 4-Chloroaniline	+++++	0.45358	0.47126	0.46611	0.48695	0.49883						
	0.48822	0.52653	0.53701				AVRG		0.49106		5.89916	<-
53 a,a-Dimethyl-phenethylamine	+++++	109173	193263	511789	1491137	2869044						
	4302609	6011295	6611179				QUAD	0.14276	0.89886	-0.00449	0.99790	<-
54 2,6-Dichlorophenol	+++++	0.21449	0.21374	0.22711	0.23924	0.25395						
	0.29378	0.29045	0.28260				AVRG		0.25192		13.26548	<-
55 Hexachloropropene	+++++	+++++	+++++	0.15228	0.16103	0.17091						
	0.19996	0.19727	0.19768				AVRG		0.17986		11.71571	<-
56 Hexachlorobutadiene	+++++	0.12045	0.12734	0.12508	0.12700	0.13025						
	0.12735	0.14366	0.14114				AVRG		0.13028		6.14598	<-
57 1,2,3-Trichlorobenzene	+++++	0.24778	0.24081	0.24403	0.24676	0.24833						
	0.24350	0.27045	0.26785				AVRG		0.25119		4.52893	<-
58 N-Nitrosodi-n-butylamine	+++++	0.23950	0.24234	0.24129	0.24700	0.25628						
	0.29610	0.28706	0.28689				AVRG		0.26206		9.10990	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
59 4-Chloro-3-Methylphenol	+++++	+++++	0.28175	0.29171	0.29859	0.30076						
	0.31417	0.33711	0.33841				AVRG		0.30893		7.11613	<-
60 p-Phenylene diamine	+++++	+++++	+++++	0.27099	0.30242	0.27862						
	0.30639	0.25131	0.22629				AVRG		0.27267		11.20574	<-
61 Safrole	+++++	0.23561	0.23268	0.23764	0.24152	0.25389						
	0.29825	0.29274	0.29001				AVRG		0.26029		10.91993	<-
62 2-Methylnaphthalene	0.57471	0.55242	0.56023	0.56387	0.57953	0.56964						
	0.59626	0.64617	0.64050				AVRG		0.58704		5.84040	
63 1-Methylnaphthalene	0.70753	0.63045	0.64731	0.63952	0.66765	0.65811						
	0.67330	0.73113	0.72487				AVRG		0.67554		5.50030	
64 Hexachlorocyclopentadiene	+++++	17482	37363	58969	214729	398719						
	678284	999611	1171594				QUAD	0.05959	3.63482	-0.30115	0.99798	<-
65 1,2,4,5-Tetrachlorobenzene	+++++	0.38331	0.37556	0.36984	0.36878	0.39012						
	0.45274	0.45433	0.44128				AVRG		0.40449		9.40631	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
66 2,4,6-Trichlorophenol	+++++	0.24892	0.26214	0.26150	0.27872	0.27988						
	0.29092	0.32416	0.32523				AVRG		0.28393		9.97889	<-
67 2,4,5-Trichlorophenol	+++++	0.28160	0.26808	0.27466	0.29939	0.29683						
	0.30775	0.34863	0.33689				AVRG		0.30173		9.51646	<-
68 1,2,3,5-Tetrachlorobenzene	+++++	0.40155	0.37908	0.38461	0.39581	0.40367						
	0.38981	0.43245	0.42596				AVRG		0.40162		4.72215	<-
69 1,4-Dinitrobenzene	+++++	+++++	21998	56255	160891	306547						
	473399	654601	728243				QUAD	0.19942	4.43803	0.01647	0.99690	<-
70 2-Chloronaphthalene	1.10979	1.05076	0.99789	1.01446	1.05097	1.04560						
	1.03091	1.12661	1.12498				AVRG		1.06133		4.50335	
71 Isosafrole 1	+++++	0.14977	0.15361	0.15351	0.15715	0.16474						
	0.18941	0.19399	0.18760				AVRG		0.16872		10.95430	<-
M 188 Isosafrole, Total	+++++	1.00020	1.01939	1.00390	1.05086	1.10299						
	1.27263	1.28718	1.23999				AVRG		1.12214		11.10138	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
72 Isosafrole 2	+++++	0.85043	0.86578	0.85040	0.89370	0.93824						
	1.08322	1.09319	1.05240				AVRG		0.95342		11.13390	<-
73 2-Nitroaniline	+++++	0.44878	0.44210	0.44283	0.45188	0.44709						
	0.44886	0.48978	0.47462				AVRG		0.45574		3.75827	<-
74 1,2,3,4-Tetrachlorobenzene	+++++	0.37681	0.35619	0.35376	0.37251	0.37575						
	0.36356	0.39799	0.39203				AVRG		0.37357		4.23023	<-
75 1,4-Naphthoquinone	+++++	+++++	0.34368	0.36239	0.39670	0.40073						
	0.44900	0.45104	0.43036				AVRG		0.40484		10.26513	<-
76 Dimethylphthalate	+++++	1.25258	1.19182	1.22666	1.28386	1.26224						
	1.30685	1.42953	1.41202				AVRG		1.29569		6.53865	<-
77 m-Dinitrobenzene	+++++	+++++	0.17158	0.19203	0.19714	0.21438						
	0.25034	0.24942	0.24015				AVRG		0.21643		14.34490	<-
78 2,6-Dinitrotoluene	+++++	0.24610	0.26106	0.26621	0.28615	0.28775						
	0.28411	0.30830	0.30589				AVRG		0.28070		7.71192	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
79 Acenaphthylene	1.83270	1.76446	1.75834	1.73442	1.84471	1.87048						
	1.90501	2.06287	1.97121				AVRG		1.86047		5.75997	
80 1,2-Dinitrobenzene	+++++	0.11899	0.12835	0.12750	0.14446	0.13989						
	0.14050	0.15308	0.15098				AVRG		0.13797		8.71648	<-
81 3-Nitroaniline	+++++	0.32086	0.36150	0.35615	0.37949	0.37817						
	0.38477	0.41658	0.41581				AVRG		0.37667		8.37545	<-
82 Acenaphthene	1.18474	1.15549	1.10240	1.09695	1.15148	1.13552						
	1.15190	1.24659	1.21179				AVRG		1.15965		4.18500	
83 2,4-Dinitrophenol	+++++	+++++	30005	65606	306924	617645						
	1069978	1570580	1815312				QUAD	0.41621	4.31572	-0.16381	0.99727	<-
84 Pentachlorobenzene	+++++	0.31764	0.31345	0.30722	0.30442	0.33508						
	0.38599	0.39384	0.38242				AVRG		0.34251		11.21719	<-
85 4-Nitrophenol	+++++	+++++	23026	39743	159171	298567						
	456611	741530	884891				QUAD	0.06518	5.24652	-0.81519	0.99437	<-

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Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
86 Dibenzofuran	1.53384	1.50467	1.43500	1.43905	1.52478	1.51600						
	1.57273	1.75777	1.64583				AVRG		1.54774		6.55983	
87 2,4-Dinitrotoluene	+++++	0.32678	0.35822	0.36214	0.39907	0.38970						
	0.38750	0.41451	0.41709				AVRG		0.38188		8.08793	<-
88 2,3,4,6-Tetrachlorophenol	+++++	+++++	16446	55005	170445	339807						
	542766	728081	832932				QUAD	0.25309	3.89709	-0.00515	0.99679	<-
89 1-Naphthylamine	+++++	1.07655	1.10056	1.05983	1.00446	0.90091						
	+++++	+++++	+++++				AVRG		1.02846		7.73902	<-
90 Zinophos	+++++	0.29484	0.29063	0.29113	0.29402	0.31337						
	0.35382	0.35096	0.33437				AVRG		0.31539		8.63152	<-
91 2,3,5,6-Tetrachlorophenol	+++++	+++++	0.18349	0.18658	0.21363	0.21691						
	0.22482	0.25462	0.24839				AVRG		0.21835		12.55514	<-
92 2-Naphthylamine	+++++	1.12198	1.17934	1.09033	1.04974	0.90758						
	0.82135	+++++	+++++				AVRG		1.02838		13.28295	<-

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Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
93 Diethylphthalate	+++++	1.32217	1.35290	1.30334	1.38681	1.36790						
	1.41058	1.53790	1.53301				AVRG		1.40182		6.35849	<-
94 Fluorene	1.39606	1.25694	1.22590	1.22957	1.29590	1.29969						
	1.31692	1.43165	1.41895				AVRG		1.31906		5.99617	
95 4-Chlorophenyl-phenylether	+++++	0.50189	0.49259	0.48485	0.49998	0.50896						
	0.50334	0.55186	0.53882				AVRG		0.51029		4.52292	<-
96 4-Nitroaniline	+++++	0.33710	0.38149	0.38316	0.40609	0.41194						
	0.41835	0.45379	0.44835				AVRG		0.40503		9.39117	<-
97 5-Nitro-o-toluidine	+++++	0.30472	0.30673	0.33133	0.33362	0.32647						
	0.34552	0.34556	0.30187				AVRG		0.32448		5.51157	<-
98 4,6-Dinitro-2-methylphenol	+++++	+++++	19789	36759	146818	283113						
	484561	710024	858552				QUAD	0.12978	7.87348	-1.58576	0.99854	<-
99 N-Nitrosodiphenylamine	+++++	0.63313	0.64115	0.65175	0.66103	0.64415						
	0.68495	0.72467	0.74951				AVRG		0.67379		6.31975	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
100 1,2-Diphenylhydrazine	+++++	0.96539	0.96550	0.95983	0.98544	0.96373						
	0.99394	1.08061	1.03164				AVRG		0.99326		4.28861	<-
101 Diphenylamine	+++++	0.63313	0.64115	0.65175	0.66103	0.64415						
	0.68495	0.72467	0.74951				AVRG		0.67379		6.31975	<-
102 Tetraethyl dithiopyrophosphat	+++++	0.08716	0.08218	0.08452	0.08876	0.09206						
	0.10800	0.10925	0.10800				AVRG		0.09499		12.09684	<-
103 Diallate 1	+++++	0.67107	0.65852	0.65816	0.65535	0.65963						
	0.72096	0.69689	+++++				AVRG		0.67437		3.72292	<-
M 189 Diallate, Total	+++++	2.71016	2.70747	2.68617	2.69028	2.74722						
	3.10769	2.97848	2.89672				AVRG		2.81552		5.66966	<-
104 Phorate	+++++	0.16771	0.17866	0.16794	0.17586	0.17977						
	0.20380	0.19688	0.19189				AVRG		0.18281		7.29551	<-
105 1,3,5-Trinitrobenzene	+++++	+++++	10541	29292	91645	171248						
	283331	409054	444684				QUAD	0.21892	12.49310	-2.49748	0.99540	<-

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Integrator : HP RTE
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Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
106 4-Bromophenyl-phenylether	+++++	0.16023	0.15028	0.15596	0.16220	0.16200						
	0.16273	0.17999	0.17983				AVRG		0.16415		6.43935	<-
107 Hexachlorobenzene	+++++	0.16410	0.16194	0.16023	0.15881	0.16397						
	0.16225	0.18191	0.18319				AVRG		0.16705		5.82511	
108 Phenacetin	+++++	0.38824	0.39888	0.43043	0.43725	0.46929						
	0.53069	0.52644	0.51458				AVRG		0.46197		12.33302	<-
109 Diallate 2	+++++	0.12589	0.13047	0.12630	0.12870	0.13502						
	0.15296	0.15240	0.15247				AVRG		0.13803		8.98309	<-
110 Dimethoate	+++++	+++++	0.32738	0.32609	0.32319	0.31966						
	0.33460	0.33561	0.30725				AVRG		0.32483		2.96933	<-
111 Pentachlorophenol	+++++	+++++	38612	71023	272574	525929						
	973950	1396769	1694705				QUAD	0.31475	8.04207	-0.87165	0.99816	<-
112 Pentachloronitrobenzene	+++++	0.08212	0.08456	0.08099	0.08563	0.09435						
	0.10939	0.11155	0.11075				AVRG		0.09492		14.29338	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
113 4-Aminobiphenyl	+++++	0.76155	0.75859	0.73978	0.72388	0.69062						
	0.71847	+++++	+++++				AVRG		0.73215		3.66595	<-
114 Pronamide	+++++	0.33954	0.33755	0.33776	0.36096	0.37276						
	0.43009	0.44014	0.43172				AVRG		0.38131		11.90545	<-
115 Phenanthrene	1.31128	1.10398	1.08209	1.08885	1.12733	1.14113						
	1.21342	1.27999	1.21429				AVRG		1.17359		7.19981	
116 Anthracene	1.27566	1.07417	1.07168	1.09024	1.14164	1.14567						
	1.21851	1.22762	1.15915				AVRG		1.15604		6.25339	
117 Dinoseb	+++++	+++++	16485	59456	190577	410357						
	697091	994965	1096883				QUAD	0.29902	5.02799	-0.42169	0.99504	<-
118 Disulfoton	+++++	0.42243	0.42793	0.43129	0.44305	0.45632						
	0.51428	0.50227	0.49187				AVRG		0.46118		7.90490	<-
119 Carbazole	+++++	1.05728	1.05586	1.09315	1.09428	1.11353						
	1.17266	1.31347	1.26380				AVRG		1.14550		8.42202	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
120 Di-n-Butylphthalate	+++++	1.43410	1.41200	1.40940	1.47819	1.48855						
	1.58969	1.40730	1.26996				AVRG		1.43615		6.32954	<-
121 4-Nitroquinoline 1-oxide	+++++	+++++	10390	38458	138274	296603						
	484552	712501	789314				QUAD	0.29300	7.21800	-1.04388	0.99638	<-
122 Methapyrilene	+++++	0.40921	0.43417	0.45963	0.43790	0.35107						
	0.37842	+++++	+++++				AVRG		0.41173		9.88269	<-
123 Fluoranthene	1.16041	1.00189	1.02723	1.01586	1.05230	1.07737						
	1.12518	1.24720	1.17221				AVRG		1.09774		7.61519	
124 Benzidine	+++++	+++++	0.72435	0.84540	0.88740	0.91049						
	0.96501	1.02253	0.98937				AVRG		0.90636		11.12890	<-
125 Pyrene	1.32959	1.19565	1.20598	1.22408	1.24581	1.25824						
	1.29653	1.43176	1.39681				AVRG		1.28716		6.51796	
126 Aramite 1	+++++	0.07332	0.06864	0.07431	0.08186	0.08718						
	0.09445	0.09865	0.09801				AVRG		0.08455		13.96473	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
M 191 Aramite, Total	+++++	0.50324	0.47632	0.51112	0.55457	0.58476						
	0.66794	0.67601	0.67415				AVRG		0.58101		14.23188	<-
127 Aramite 2	+++++	0.09200	0.08314	0.08993	0.09911	0.10627						
	0.11339	0.12025	0.11807				AVRG		0.10277		13.48361	<-
128 p-Dimethylamino azobenzene	+++++	0.20208	0.20737	0.20893	0.22779	0.24858						
	0.27391	0.28289	0.27534				AVRG		0.24086		13.96755	<-
129 p-Chlorobenzilate	+++++	0.52128	0.51452	0.51255	0.54739	0.57983						
	0.65344	0.66888	0.63959				AVRG		0.57968		11.32938	<-
130 Famphur 1	+++++	0.43159	0.42092	0.39086	0.28024	0.15102						
	+++++	+++++	+++++				AVRG		0.33493		35.54158	<-
131 Butylbenzylphthalate	+++++	+++++	+++++	0.71615	0.75912	0.73211						
	0.74459	0.81198	0.78242				AVRG		0.75773		4.61431	<-
132 3,3'-Dimethylbenzidine	+++++	75233	122560	273671	568103	599517						
	889592	1076989	+++++				QUAD	-0.12036	2.50460	1.07412	0.98461	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
133 3,3'-Dimethoxybenzidine	+++++	0.25261	0.27389	0.27629	0.27784	0.31661						
	0.28895	0.35627	0.30958				AVRG		0.29401		11.02111	<-
134 2-Acetylaminofluorene	+++++	63864	110284	287178	728931	1435481						
	2161439	3184977	3393167				QUAD	0.11235	1.46813	-0.03245	0.99574	<-
135 3,3'-Dichlorobenzidine	+++++	0.42563	0.42742	0.43358	0.45450	0.45212						
	0.48861	0.53343	0.53198				AVRG		0.46841		9.49937	<-
136 Benzo(a)Anthracene	1.20223	1.01618	0.99037	1.00407	1.02148	1.05297						
	1.08185	1.18941	1.20510				AVRG		1.08485		8.26917	
137 Chrysene	1.02550	0.95018	0.99275	0.93842	0.94914	0.97610						
	1.00998	1.12046	1.10763				AVRG		1.00780		6.63613	
138 4,4'-Methylene bis(o-chloroan	+++++	0.21627	0.21610	0.22233	0.23263	0.24005						
	0.25468	0.28803	0.28058				AVRG		0.24384		11.55055	<-
139 bis(2-ethylhexyl)Phthalate	+++++	1.02103	1.01934	1.10928	1.06242	1.04418						
	1.06853	1.15274	1.11881				AVRG		1.07454		4.49035	<-

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
140 Di-n-octylphthalate	+++++	1.59336	1.69938	1.75496	1.94101	1.98781						
	2.11054	2.13691	1.99184				AVRG		1.90198		10.39383	<-
141 Benzo(b)fluoranthene	1.17751	1.12616	1.05112	1.09010	1.20785	1.10758						
	1.20318	1.44586	1.53429				AVRG		1.21596		13.59812	
142 Benzo(k)fluoranthene	1.37095	1.19381	1.20222	1.16111	1.17452	1.28278						
	1.33842	1.30607	1.23491				AVRG		1.25164		6.05223	
143 7,12-dimethylbenz[a]anthracen	+++++	0.45909	0.45407	0.45643	0.48952	0.53523						
	0.62307	0.45646	0.47289				AVRG		0.49334		11.98081	<-
144 Hexachlorophene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
145 Hexachlorophene product	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
146 Benzo(a)pyrene	1.19338	1.00163	1.01529	1.02593	1.06695	1.10323						
	1.14628	1.26769	1.24705				AVRG		1.11860		8.99156	

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	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
148 3-Methylcholanthrene	+++++	0.50409	0.48273	0.48968	0.51320	0.55866						
	0.64443	0.67062	0.66241				AVRG		0.56573		14.30145	<-
149 Indeno(1,2,3-cd)pyrene	1.08469	1.08155	1.09521	1.09990	1.20110	1.17274						
	1.25949	1.38495	1.37084				AVRG		1.19450		10.06931	
150 Dibenz(a,h)anthracene	0.93155	0.86051	0.87534	0.90769	0.97872	0.98418						
	1.06959	1.18589	1.16355				AVRG		0.99522		12.03912	
151 Benzo(g,h,i)perylene	0.84713	0.91082	0.89842	0.90269	0.94377	0.94480						
	1.00279	1.09732	1.09800				AVRG		0.96064		9.19770	
199 3-Picoline	+++++	1.29650	1.30045	1.35956	1.40349	1.45484						
	1.66722	1.63981	1.58670				AVRG		1.46357		10.22358	<-
200 N,N-Dimethylacetamide	+++++	+++++	1.40576	1.35212	1.33302	1.35922						
	1.52495	1.44863	1.38037				AVRG		1.40058		4.77495	<-
201 Quinoline	+++++	0.46272	0.49990	0.50938	0.53765	0.54984						
	0.56940	0.54968	0.57276				AVRG		0.53142		7.13458	<-

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Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
202 Diphenyl	+++++	1.15373	1.09922	1.09810	1.15597	1.17205						
	1.18609	1.15966	1.15395				AVRG		1.14735		2.78811	<-
203 Diphenyl ether	+++++	0.58402	0.58099	0.58177	0.60857	0.60145						
	0.61554	0.60702	0.62127				AVRG		0.60008		2.64800	<-
204 6-Methylchrysene	+++++	0.54262	0.55956	0.54499	0.59250	0.61305						
	0.63617	0.64160	0.66418				AVRG		0.59934		7.80933	<-
205 Benzenethiol	+++++	+++++	90837	148496	306057	517829						
	846725	1090375	1231393				QUAD	-0.27094	1.84755	-0.01994	0.99244	<-
207 Indene	+++++	1.83351	1.89234	1.74912	1.74379	1.56264						
	1.64409	1.65456	+++++				AVRG		1.72572		6.63140	<-
208 Dibenz(a,j)acridine	+++++	0.54906	0.57813	0.59947	0.64742	0.68353						
	0.69735	0.72602	0.73104				AVRG		0.65150		10.63533	<-
209 Benzaldehyde	+++++	1.10480	1.08083	1.07482	1.01480	0.84110						
	0.82360	+++++	+++++				AVRG		0.98999		12.70472	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
210 Caprolactam	+++++	+++++	0.10446	0.10495	0.12236	0.11795						
	0.12228	0.13161	0.13081				AVRG		0.11920		9.25300	<-
211 1,1'-Biphenyl	+++++	1.43926	1.39627	1.39994	1.47823	1.47892						
	1.47892	1.63631	1.60789				AVRG		1.48947		5.95965	<-
212 Atrazine	+++++	0.17697	0.19886	0.19764	0.20540	0.18867						
	0.20055	0.20073	0.20025				AVRG		0.19613		4.62540	<-
213 Benzothiazole	+++++	0.38346	0.40661	0.39101	0.41698	0.42404						
	0.42671	0.42084	0.43791				AVRG		0.41345		4.48118	<-
214 1,3-Dimethyl-2-Thiourea	+++++	+++++	63267	117097	318843	964733						
	1389176	1980883	2211586				QUAD	0.12720	2.43097	-0.06537	0.99963	<-
215 Phenyl ether	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
216 1,3-Diethyl-2-Thiourea	+++++	+++++	57892	135231	302188	886866						
	1337570	1863046	2026236				QUAD	0.12268	2.49685	-0.01946	0.99968	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
217 1,3-Dibutyl-2-Thiourea	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	
218 1,1,3,3-Tetramethyl-2-Thioure	+++++	0.24141	0.25625	0.26125	0.27860	0.28375						
	0.28540	0.28161	0.28855				AVRG		0.27210		6.25274	<-
219 o-Benzyl Phenol	+++++	0.22097	0.25138	0.25017	0.27238	0.28430						
	0.28218	0.28105	0.28943				AVRG		0.26648		8.86039	<-
220 Diphenyl Thiourea	+++++	+++++	23100	36633	79868	342411						
	717384	1119619	1289906				QUAD	0.40689	8.54909	-2.65630	0.98894	<-
221 Hexabromobenzene	+++++	+++++	+++++	+++++	0.04747	0.04928						
	0.05183	0.05072	0.05449				AVRG		0.05076		5.21527	
222 Dibenz(a,h)acridine	+++++	0.61392	0.55428	0.60700	0.64170	0.72136						
	0.71504	0.74668	0.75374				AVRG		0.66922		11.13368	<-
223 1,2-bis(2-chloroethoxy)ethane	+++++	0.23848	0.26983	0.25753	0.26767	0.26991						
	0.27302	0.25990	0.26878				AVRG		0.26314		4.28612	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
224 Acrylamide	+++++	+++++	0.39173	0.40426	0.44388	0.47362						
	0.49672	0.49956	0.50483				AVRG		0.45923		10.18753	<-
225 Methyl parathion	+++++	+++++	0.25705	0.27306	0.28762	0.28790						
	0.29813	0.30399	0.28355				AVRG		0.28447		5.50606	<-
226 Parathion	+++++	22209	39148	104322	260672	497901						
	746047	1026641	1140096				QUAD	0.09467	4.72486	-0.15980	0.99869	<-
227 Isodrin	+++++	0.14682	0.14852	0.14234	0.14551	0.14341						
	0.16114	0.15683	0.15369				AVRG		0.14978		4.50331	<-
M 229 Pamphur,Total	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
230 Famphur 2	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
231 2-Chloroacetophenone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
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Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
232 2-Methylcyclohexanone	+++++	0.84602	0.80648	0.86296	0.83759	0.80718	0.95012	0.89664	0.85862	AVRG		0.85820		5.53585	<-
233 3-Methylcyclohexanone	+++++	1.41552	1.39129	1.40184	1.36862	1.35336	1.60598	1.50617	1.45654	AVRG		1.43741		5.83124	<-
234 4-Methylcyclohexanone	+++++	1.25855	1.27933	1.28465	1.21750	1.19234	1.41395	1.31428	1.26184	AVRG		1.27780		5.24833	<-
235 Tributyl phosphate	+++++	1.59923	1.72628	1.73640	1.73667	1.84491	2.20798	2.02490	+++++	AVRG		1.83948		11.35852	<-
236 Phenyl sulfone	+++++	+++++	195266	852266	784907	2087755	3006676	4159666	4530829	QUAD	-0.23399	1.88720	-0.00156	0.99026	<-
237 3,4-Dichloronitrobenzene	+++++	+++++	0.14908	0.16105	0.17235	0.18016	0.18368	0.18228	0.18735	AVRG		0.17371		8.03584	<-
238 Bis(2-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
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Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
239 Bis(4-hydroxyphenyl)methane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
240 4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
241 2,3-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
242 2,5-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
243 Octachlorostyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
244 Octachlorocyclopentene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-
245 Catechol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++	+++++				AVRG		0.000e+000		0.000e+000	<-

Report Date : 08-Mar-2011 06:35

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9	Curve	Coefficients b	m1	m2	%RSD or R^2	
246 3-methylcatechol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
247 4-methylcatechol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
248 Hydroquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
249 Resorcinol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
250 N-methyl-pyrrolidone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
251 N,N-Dimethylformamide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
$ 154 Nitrobenzene-d5	0.48637	0.43077	0.43848	0.42754	0.43500	0.43389	0.42037	0.42961	0.44091	AVRG		0.43811		4.35851	

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Compound	0.0500000 Level 1	0.2500000 Level 2	0.5000000 Level 3	1.0000 Level 4	2.5000 Level 5	5.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	7.5000 Level 7	10.0000 Level 8	12.5000 Level 9									
$ 155 2-Fluorobiphenyl	1.25848	1.15773	1.15723	1.14865	1.19454	1.21435						
	1.20445	1.31744	1.29845				AVRG		1.21681		5.10495	
$ 156 Terphenyl-d14	0.73938	0.63930	0.66822	0.66448	0.67414	0.68508						
	0.67860	0.74261	0.73789				AVRG		0.69219		5.49115	
$ 157 Phenol-d5	+++++	1.51717	1.58307	1.57807	1.57923	1.56778						
	1.62627	1.73479	1.70679				AVRG		1.61165		4.58819	
$ 158 2-Fluorophenol	+++++	1.16208	1.20250	1.19065	1.19363	1.20726						
	1.23198	1.34314	1.32786				AVRG		1.23239		5.40808	
$ 159 2,4,6-Tribromophenol	+++++	0.09829	0.08976	0.09487	0.10234	0.10817						
	0.11440	0.12507	0.12821				AVRG		0.10764		13.00220	<-
$ 186 2-Chlorophenol-d4	+++++	1.21509	1.20056	1.19153	1.21581	1.21375						
	1.24346	1.33034	1.31976				AVRG		1.24129		4.34077	<-
$ 187 1,2-Dichlorobenzene-d4	+++++	0.87597	0.89980	0.86510	0.86239	0.86021						
	0.84368	0.90552	0.89338				AVRG		0.87576		2.49325	<-

Report Date : 08-Mar-2011 06:35

TestAmerica North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAR-2011 12:03
End Cal Date : 07-MAR-2011 19:23
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m
Last Edit : 07-Mar-2011 19:51 hulat

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i
Lab File ID: ICVTCL.D
Analysis Type:
Lab Sample ID: ICVTCL
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m

Injection Date: 07-MAR-2011 14:36
Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Init. Cal. Times: 12:03 19:23
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
198 1,4-Dioxane	0.62029	0.60093	0.60093	0.010	3.12226	50.00000	Averaged
9 Pyridine	1.71159	1.72651	1.72651	0.010	-0.87206	50.00000	Averaged
10 N-Nitrosodimethylamine	1.02266	1.02215	1.02215	0.010	0.05030	50.00000	Averaged
12 3-Chloropropionitrile	0.88265	0.89149	0.89149	0.010	-1.00198	50.00000	Averaged
209 Benzaldehyde	0.98999	0.94892	0.94892	0.010	4.14905	50.00000	Averaged
21 Aniline	2.48205	2.46294	2.46294	0.010	0.77003	50.00000	Averaged
22 Phenol	1.66650	1.66705	1.66705	0.010	-0.03292	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.39987	1.38529	1.38529	0.010	1.04159	50.00000	Averaged
24 2-Chlorophenol	1.36318	1.35783	1.35783	0.010	0.39236	50.00000	Averaged
26 1,3-Dichlorobenzene	1.45772	1.46422	1.46422	0.010	-0.44595	50.00000	Averaged
27 1,4-Dichlorobenzene	1.43491	1.44258	1.44258	0.010	-0.53442	20.00000	Averaged
28 1,2-Dichlorobenzene	1.39157	1.40686	1.40686	0.010	-1.09906	50.00000	Averaged
29 Benzyl Alcohol	0.87154	0.88409	0.88409	0.010	-1.43962	50.00000	Averaged
30 2-Methylphenol	1.23048	1.21869	1.21869	0.010	0.95875	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.97503	2.02683	2.02683	0.010	-2.62239	50.00000	Averaged
37 Acetophenone	1.95481	1.94044	1.94044	0.010	0.73479	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.22593	1.25439	1.25439	0.050	-2.32173	50.00000	Averaged
192 4-Methylphenol	1.30996	1.31308	1.31308	0.010	-0.23843	50.00000	Averaged
34 Hexachloroethane	0.58431	0.58440	0.58440	0.010	-0.01522	50.00000	Averaged
35 Nitrobenzene	0.40028	0.40597	0.40597	0.010	-1.42087	50.00000	Averaged
41 Isophorone	0.73892	0.75794	0.75794	0.010	-2.57369	50.00000	Averaged
42 2-Nitrophenol	0.17538	0.18005	0.18005	0.010	-2.66828	20.00000	Averaged
43 2,4-Dimethylphenol	0.35503	0.36551	0.36551	0.010	-2.95048	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.39587	0.40413	0.40413	0.010	-2.08817	50.00000	Averaged
46 2,4-Toluenediamene	0.22988	0.23616	0.23616	0.010	-2.73077	50.00000	Averaged
47 1,3,5-Trichlorobenzene	0.27147	0.27140	0.27140	0.010	0.02442	50.00000	Averaged
48 2,4-Dichlorophenol	0.24145	0.24822	0.24822	0.010	-2.80232	20.00000	Averaged
49 Benzoic Acid	10.00000	9.60911	0.24493	0.010	3.90886	0.000e+000	Quadratic
50 1,2,4-Trichlorobenzene	0.26915	0.26931	0.26931	0.010	-0.05777	50.00000	Averaged
51 Naphthalene	1.06810	1.08408	1.08408	0.010	-1.49589	50.00000	Averaged
52 4-Chloroaniline	0.49106	0.48686	0.48686	0.010	0.85558	50.00000	Averaged
56 Hexachlorobutadiene	0.13028	0.13041	0.13041	0.010	-0.09704	20.00000	Averaged
210 Caprolactam	0.11920	0.11994	0.11994	0.010	-0.61427	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.25119	0.25081	0.25081	0.010	0.15223	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.30893	0.31073	0.31073	0.010	-0.58106	20.00000	Averaged
62 2-Methylnaphthalene	0.58704	0.58598	0.58598	0.010	0.18011	50.00000	Averaged
63 1-Methylnaphthalene	0.67554	0.66418	0.66418	0.010	1.68154	50.00000	Averaged
64 Hexachlorocyclopentadiene	5.00000	4.87819	0.27785	0.050	2.43614	0.000e+000	Quadratic
66 2,4,6-Trichlorophenol	0.28393	0.28163	0.28163	0.010	0.81212	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.30173	0.28604	0.28604	0.010	5.19924	50.00000	Averaged
211 1,1'-Biphenyl	1.48947	1.45818	1.45818	0.010	2.10043	50.00000	Averaged
68 1,2,3,5-Tetrachlorobenzene	0.40162	0.39572	0.39572	0.010	1.46926	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 07-MAR-2011 14:36
Lab File ID: ICVTCL.D Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Analysis Type: Init. Cal. Times: 12:03 19:23
Lab Sample ID: ICVTCL Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
70 2-Chloronaphthalene	1.06133	1.04934	1.04934	0.010	1.13008	50.00000	Averaged
73 2-Nitroaniline	0.45574	0.46210	0.46210	0.010	-1.39495	50.00000	Averaged
74 1,2,3,4-Tetrachlorobenzene	0.37357	0.36383	0.36383	0.010	2.60806	50.00000	Averaged
76 Dimethylphthalate	1.29569	1.26880	1.26880	0.010	2.07586	50.00000	Averaged
78 2,6-Dinitrotoluene	0.28070	0.28730	0.28730	0.010	-2.35140	50.00000	Averaged
79 Acenaphthylene	1.86047	1.86249	1.86249	0.010	-0.10893	50.00000	Averaged
80 1,2-Dinitrobenzene	0.13797	0.14466	0.14466	0.010	-4.84703	50.00000	Averaged
81 3-Nitroaniline	0.37667	0.37091	0.37091	0.010	1.52725	50.00000	Averaged
82 Acenaphthene	1.15965	1.14026	1.14026	0.010	1.67198	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	9.56454	0.21076	0.050	4.35463	0.000e+000	Quadratic
85 4-Nitrophenol	5.00000	4.77374	0.19121	0.050	4.52512	0.000e+000	Quadratic
86 Dibenzofuran	1.54774	1.53767	1.53767	0.010	0.65079	50.00000	Averaged
87 2,4-Dinitrotoluene	0.38188	0.39430	0.39430	0.010	-3.25229	50.00000	Averaged
91 2,3,5,6-Tetrachlorophenol	0.21835	0.21574	0.21574	0.010	1.19363	50.00000	Averaged
93 Diethylphthalate	1.40182	1.39781	1.39781	0.010	0.28650	50.00000	Averaged
94 Fluorene	1.31906	1.30137	1.30137	0.010	1.34175	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.51029	0.51375	0.51375	0.010	-0.67813	50.00000	Averaged
96 4-Nitroaniline	0.40503	0.40626	0.40626	0.010	-0.30328	50.00000	Averaged
98 4,6-Dinitro-2-methylphenol	5.00000	4.80097	0.12297	0.010	3.98069	0.000e+000	Quadratic
99 N-Nitrosodiphenylamine	0.67379	0.66855	0.66855	0.010	0.77742	20.00000	Averaged
100 1,2-Diphenylhydrazine	0.99326	1.00240	1.00240	0.010	-0.92002	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.16415	0.16738	0.16738	0.010	-1.96861	50.00000	Averaged
107 Hexachlorobenzene	0.16705	0.15910	0.15910	0.010	4.75678	50.00000	Averaged
212 Atrazine	0.19613	0.19783	0.19783	0.010	-0.86581	50.00000	Averaged
111 Pentachlorophenol	10.00000	10.04870	0.12568	0.010	-0.48698	20.00000	Quadratic
115 Phenanthrene	1.17359	1.16364	1.16364	0.010	0.84832	50.00000	Averaged
116 Anthracene	1.15604	1.16793	1.16793	0.010	-1.02883	50.00000	Averaged
119 Carbazole	1.14550	1.13290	1.13290	0.010	1.10015	50.00000	Averaged
120 Di-n-Butylphthalate	1.43615	1.51853	1.51853	0.010	-5.73605	50.00000	Averaged
123 Fluoranthene	1.09774	1.08664	1.08664	0.010	1.01073	20.00000	Averaged
124 Benzidine	0.90636	0.91081	0.91081	0.010	-0.49095	50.00000	Averaged
125 Pyrene	1.28716	1.28261	1.28261	0.010	0.35351	50.00000	Averaged
131 Butylbenzylphthalate	0.75773	0.74975	0.74975	0.010	1.05264	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	0.29401	0.26389	0.26389	0.010	10.24232	50.00000	Averaged
135 3,3'-Dichlorobenzidine	0.46841	0.45779	0.45779	0.010	2.26725	50.00000	Averaged
136 Benzo(a)Anthracene	1.08485	1.05353	1.05353	0.010	2.88731	50.00000	Averaged
137 Chrysene	1.00780	0.97352	0.97352	0.010	3.40118	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	0.24384	0.24365	0.24365	0.010	0.07576	50.00000	Averaged
139 bis(2-ethylhexyl)Phthalate	1.07454	1.05285	1.05285	0.010	2.01876	50.00000	Averaged
140 Di-n-octylphthalate	1.90198	1.99112	1.99112	0.010	-4.68668	20.00000	Averaged
141 Benzo(b)fluoranthene	1.21596	1.17555	1.17555	0.010	3.32300	50.00000	Averaged
142 Benzo(k)fluoranthene	1.25164	1.24772	1.24772	0.010	0.31324	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 07-MAR-2011 14:36
Lab File ID: ICVTCL.D Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Analysis Type: Init. Cal. Times: 12:03 19:23
Lab Sample ID: ICVTCL Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10307A.b\8270C-625.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
146 Benzo(a)pyrene	1.11860	1.10354	1.10354	0.010	1.34661	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.19450	1.22458	1.22458	0.010	-2.51826	50.00000	Averaged
150 Dibenz(a,h)anthracene	0.99522	1.01799	1.01799	0.010	-2.28720	50.00000	Averaged
151 Benzo(g,h,i)perylene	0.96064	0.96634	0.96634	0.010	-0.59411	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.43811	0.44567	0.44567	0.010	-1.72671	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.21681	1.20417	1.20417	0.010	1.03859	50.00000	Averaged
$ 156 Terphenyl-d14	0.69219	0.70238	0.70238	0.010	-1.47256	50.00000	Averaged
$ 157 Phenol-d5	1.61165	1.60230	1.60230	0.010	0.58010	50.00000	Averaged
$ 158 2-Fluorophenol	1.23239	1.22301	1.22301	0.010	0.76126	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.10764	0.10668	0.10668	0.010	0.89332	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.24129	1.21077	1.21077	0.010	2.45818	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.87576	0.86977	0.86977	0.010	0.68368	50.00000	Averaged
M 195 Cresols, total	2.54044	2.53177	2.53177	0.010	0.34143	50.00000	Averaged
101 Diphenylamine	0.67379	0.66855	0.66855	0.010	0.77742	50.00000	Averaged

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID: 2DF0309 DFTPP Injection Date: 03/09/11

Instrument ID: A4AG2 DFTPP Injection Time: 0841

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	51.3
68	Less than 2.0% of mass 69	0.8 (1.6)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	25.0 - 75.0% of mass 198	58.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.2
275	10.0 - 30.0% of mass 198	23.8
365	Greater than 0.75% of mass 198	4.34
441	Present, but less than mass 443	9.5
442	40.0 - 110.0% of mass 198	57.3
443	15.0 - 24.0% of mass 442	11.4 (19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	2SMH0309	03/09/11	0932
02	ME8KHCHK	ME8KH1AC	ME8KH1AC	03/09/11	1023
03	ME8KHCKDUP	ME8KH1AD	ME8KH1AD	03/09/11	1040
04	ME8KHBLK	ME8KH1AA	ME8KH1AA	03/09/11	1256
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 09-MAR-2011 09:32
Lab File ID: 2SMH0309.D Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Analysis Type: Init. Cal. Times: 12:03 19:23
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10309A.b\8270C-625.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
198 1,4-Dioxane	0.62029	0.55938	0.55938	0.010	9.81984	50.00000	Averaged
9 Pyridine	1.71159	1.63398	1.63398	0.010	4.53437	50.00000	Averaged
10 N-Nitrosodimethylamine	1.02266	1.00832	1.00832	0.010	1.40227	50.00000	Averaged
12 3-Chloropropionitrile	0.88265	0.89733	0.89733	0.010	-1.66256	50.00000	Averaged
209 Benzaldehyde	0.98999	0.80653	0.80653	0.010	18.53208	50.00000	Averaged
21 Aniline	2.48205	2.59356	2.59356	0.010	-4.49254	50.00000	Averaged
22 Phenol	1.66650	1.71429	1.71429	0.010	-2.86787	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.39987	1.42720	1.42720	0.010	-1.95245	50.00000	Averaged
24 2-Chlorophenol	1.36318	1.40022	1.40022	0.010	-2.71770	50.00000	Averaged
26 1,3-Dichlorobenzene	1.45772	1.51069	1.51069	0.010	-3.63402	50.00000	Averaged
27 1,4-Dichlorobenzene	1.43491	1.48316	1.48316	0.010	-3.36242	20.00000	Averaged
28 1,2-Dichlorobenzene	1.39157	1.44650	1.44650	0.010	-3.94759	50.00000	Averaged
29 Benzyl Alcohol	0.87154	0.84345	0.84345	0.010	3.22390	50.00000	Averaged
30 2-Methylphenol	1.23048	1.23894	1.23894	0.010	-0.68746	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.97503	2.08386	2.08386	0.010	-5.51009	50.00000	Averaged
37 Acetophenone	1.95481	2.01385	2.01385	0.010	-3.02039	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.22593	1.28482	1.28482	0.050	-4.80359	50.00000	Averaged
192 4-Methylphenol	1.30996	1.34556	1.34556	0.010	-2.71768	50.00000	Averaged
34 Hexachloroethane	0.58431	0.60769	0.60769	0.010	-4.00181	50.00000	Averaged
35 Nitrobenzene	0.40028	0.42180	0.42180	0.010	-5.37672	50.00000	Averaged
41 Isophorone	0.73892	0.79203	0.79203	0.010	-7.18737	50.00000	Averaged
42 2-Nitrophenol	0.17538	0.19044	0.19044	0.010	-8.59146	20.00000	Averaged
43 2,4-Dimethylphenol	0.35503	0.38906	0.38906	0.010	-9.58497	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.39587	0.42349	0.42349	0.010	-6.97747	50.00000	Averaged
46 2,4-Toluenediamene	0.22988	0.18753	0.18753	0.010	18.42042	50.00000	Averaged
47 1,3,5-Trichlorobenzene	0.27147	0.28975	0.28975	0.010	-6.73530	50.00000	Averaged
48 2,4-Dichlorophenol	0.24145	0.26080	0.26080	0.010	-8.01571	20.00000	Averaged
49 Benzoic Acid	10.00000	7.88480	0.19422	0.010	21.15205	0.000e+000	Quadratic
50 1,2,4-Trichlorobenzene	0.26915	0.28744	0.28744	0.010	-6.79537	50.00000	Averaged
51 Naphthalene	1.06810	1.13482	1.13482	0.010	-6.24662	50.00000	Averaged
52 4-Chloroaniline	0.49106	0.52341	0.52341	0.010	-6.58812	50.00000	Averaged
56 Hexachlorobutadiene	0.13028	0.14018	0.14018	0.010	-7.59917	20.00000	Averaged
210 Caprolactam	0.11920	0.13098	0.13098	0.010	-9.88103	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.25119	0.26744	0.26744	0.010	-6.46858	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.30893	0.33011	0.33011	0.010	-6.85602	20.00000	Averaged
62 2-Methylnaphthalene	0.58704	0.62626	0.62626	0.010	-6.68078	50.00000	Averaged
63 1-Methylnaphthalene	0.67554	0.72211	0.72211	0.010	-6.89421	50.00000	Averaged
64 Hexachlorocyclopentadiene	5.00000	4.87345	0.27755	0.050	2.53092	0.000e+000	Quadratic
66 2,4,6-Trichlorophenol	0.28393	0.28942	0.28942	0.010	-1.93220	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.30173	0.31416	0.31416	0.010	-4.12222	50.00000	Averaged
211 1,1'-Biphenyl	1.48947	1.55310	1.55310	0.010	-4.27221	50.00000	Averaged
68 1,2,3,5-Tetrachlorobenzene	0.40162	0.42511	0.42511	0.010	-5.84946	50.00000	Averaged

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i
Lab File ID: 2SMH0309.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10309A.b\8270C-625.m

Injection Date: 09-MAR-2011 09:32
Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Init. Cal. Times: 12:03 19:23
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
70 2-Chloronaphthalene	1.06133	1.10634	1.10634	0.010	-4.24100	50.00000	Averaged
73 2-Nitroaniline	0.45574	0.48079	0.48079	0.010	-5.49560	50.00000	Averaged
74 1,2,3,4-Tetrachlorobenzene	0.37357	0.39500	0.39500	0.010	-5.73611	50.00000	Averaged
76 Dimethylphthalate	1.29569	1.35667	1.35667	0.010	-4.70628	50.00000	Averaged
78 2,6-Dinitrotoluene	0.28070	0.30697	0.30697	0.010	-9.35898	50.00000	Averaged
79 Acenaphthylene	1.86047	1.97592	1.97592	0.010	-6.20543	50.00000	Averaged
80 1,2-Dinitrobenzene	0.13797	0.14895	0.14895	0.010	-7.96126	50.00000	Averaged
81 3-Nitroaniline	0.37667	0.39746	0.39746	0.010	-5.52062	50.00000	Averaged
82 Acenaphthene	1.15965	1.19951	1.19951	0.010	-3.43753	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	9.80879	0.21692	0.050	1.91212	0.000e+000	Quadratic
85 4-Nitrophenol	5.00000	5.13611	0.20756	0.050	-2.72214	0.000e+000	Quadratic
86 Dibenzofuran	1.54774	1.63696	1.63696	0.010	-5.76424	50.00000	Averaged
87 2,4-Dinitrotoluene	0.38188	0.42426	0.42426	0.010	-11.09809	50.00000	Averaged
91 2,3,5,6-Tetrachlorophenol	0.21835	0.20903	0.20903	0.010	4.26739	50.00000	Averaged
93 Diethylphthalate	1.40182	1.50799	1.50799	0.010	-7.57303	50.00000	Averaged
94 Fluorene	1.31906	1.41557	1.41557	0.010	-7.31605	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.51029	0.54734	0.54734	0.010	-7.26049	50.00000	Averaged
96 4-Nitroaniline	0.40503	0.43230	0.43230	0.010	-6.73125	50.00000	Averaged
98 4,6-Dinitro-2-methylphenol	5.00000	5.04729	0.13015	0.010	-0.94578	0.000e+000	Quadratic
99 N-Nitrosodiphenylamine	0.67379	0.70974	0.70974	0.010	-5.33485	20.00000	Averaged
100 1,2-Diphenylhydrazine	0.99326	1.05246	1.05246	0.010	-5.96063	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.16415	0.18130	0.18130	0.010	-10.44572	50.00000	Averaged
107 Hexachlorobenzene	0.16705	0.17978	0.17978	0.010	-7.61920	50.00000	Averaged
212 Atrazine	0.19613	0.20306	0.20306	0.010	-3.53320	50.00000	Averaged
111 Pentachlorophenol	10.00000	8.31217	0.10107	0.010	16.87830	0.000e+000	Quadratic
115 Phenanthrene	1.17359	1.26601	1.26601	0.010	-7.87421	50.00000	Averaged
116 Anthracene	1.15604	1.26390	1.26390	0.010	-9.33079	50.00000	Averaged
119 Carbazole	1.14550	1.23547	1.23547	0.010	-7.85423	50.00000	Averaged
120 Di-n-Butylphthalate	1.43615	1.61013	1.61013	0.010	-12.11460	50.00000	Averaged
123 Fluoranthene	1.09774	1.16303	1.16303	0.010	-5.94773	20.00000	Averaged
124 Benzidine	0.90636	0.89613	0.89613	0.010	1.12932	50.00000	Averaged
125 Pyrene	1.28716	1.29881	1.29881	0.010	-0.90516	50.00000	Averaged
131 Butylbenzylphthalate	0.75773	0.75555	0.75555	0.010	0.28743	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	0.29401	0.30628	0.30628	0.010	-4.17658	50.00000	Averaged
135 3,3'-Dichlorobenzidine	0.46841	0.48432	0.48432	0.010	-3.39799	50.00000	Averaged
136 Benzo(a)Anthracene	1.08485	1.10352	1.10352	0.010	-1.72112	50.00000	Averaged
137 Chrysene	1.00780	1.03970	1.03970	0.010	-3.16584	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	0.24384	0.25171	0.25171	0.010	-3.22723	50.00000	Averaged
139 bis(2-ethylhexyl)Phthalate	1.07454	1.10920	1.10920	0.010	-3.22541	50.00000	Averaged
140 Di-n-octylphthalate	1.90198	2.12925	2.12925	0.010	-11.94920	20.00000	Averaged
141 Benzo(b)fluoranthene	1.21596	1.27434	1.27434	0.010	-4.80071	50.00000	Averaged
142 Benzo(k)fluoranthene	1.25164	1.27916	1.27916	0.010	-2.19808	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i
Lab File ID: 2SMH0309.D
Analysis Type:
Lab Sample ID: L6
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10309A.b\8270C-625.m

Injection Date: 09-MAR-2011 09:32
Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Init. Cal. Times: 12:03 19:23
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
146 Benzo(a)pyrene	1.11860	1.18563	1.18563	0.010	-5.99227	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.19450	1.29278	1.29278	0.010	-8.22835	50.00000	Averaged
150 Dibenz(a,h)anthracene	0.99522	1.07849	1.07849	0.010	-8.36639	50.00000	Averaged
151 Benzo(g,h,i)perylene	0.96064	1.03584	1.03584	0.010	-7.82874	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.43811	0.41929	0.41929	0.010	4.29411	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.21681	1.27820	1.27820	0.010	-5.04501	50.00000	Averaged
$ 156 Terphenyl-d14	0.69219	0.72201	0.72201	0.010	-4.30791	50.00000	Averaged
$ 157 Phenol-d5	1.61165	1.66428	1.66428	0.010	-3.26589	50.00000	Averaged
$ 158 2-Fluorophenol	1.23239	1.22737	1.22737	0.010	0.40693	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.10764	0.10962	0.10962	0.010	-1.84097	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.24129	1.26887	1.26887	0.010	-2.22221	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.87576	0.91733	0.91733	0.010	-4.74765	50.00000	Averaged
M 195 Cresols, total	2.54044	2.58450	2.58450	0.010	-1.73437	50.00000	Averaged
101 Diphenylamine	0.67379	0.70974	0.70974	0.010	-5.33485	50.00000	Averaged

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID: 2DF0310 DFTPP Injection Date: 03/10/11

Instrument ID: A4AG2 DFTPP Injection Time: 0901

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.5
68	Less than 2.0% of mass 69	0.1 (0.1)1
69	Mass 69 relative abundance	45.4
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	57.6
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	24.1
365	Greater than 0.75% of mass 198	4.28
441	Present, but less than mass 443	9.1
442	40.0 - 110.0% of mass 198	61.9
443	15.0 - 24.0% of mass 442	11.9 (19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD006	L6	2SMH0310	03/10/11	0935
02	MSA-SW38-030	ME7571AC	ME7571AC	03/10/11	1946
03	MSA-SW40-030	ME76H1AN	ME76H1AN	03/10/11	2003
04	MSA-SW41-030	ME76P1AN	ME76P1AN	03/10/11	2020
05					
06					
07					
08					
09					
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11					
12					
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14					
15					
16					
17					
18					
19					
20					
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22					

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 10-MAR-2011 09:35
Lab File ID: 2SMH0310.D Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Analysis Type: Init. Cal. Times: 12:03 19:23
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10310A.b\8270C-625.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
198 1,4-Dioxane	0.62029	0.58185	0.58185	0.010	6.19699	50.00000	Averaged
9 Pyridine	1.71159	1.67718	1.67718	0.010	2.01035	50.00000	Averaged
10 N-Nitrosodimethylamine	1.02266	1.09033	1.09033	0.010	-6.61660	50.00000	Averaged
12 3-Chloropropionitrile	0.88265	1.00238	1.00238	0.010	-13.56497	50.00000	Averaged
209 Benzaldehyde	0.98999	0.88650	0.88650	0.010	10.45431	50.00000	Averaged
21 Aniline	2.48205	2.72499	2.72499	0.010	-9.78799	50.00000	Averaged
22 Phenol	1.66650	1.91906	1.91906	0.010	-15.15503	20.00000	Averaged
23 bis(2-Chloroethyl)ether	1.39987	1.70964	1.70964	0.010	-22.12885	50.00000	Averaged
24 2-Chlorophenol	1.36318	1.51135	1.51135	0.010	-10.86968	50.00000	Averaged
26 1,3-Dichlorobenzene	1.45772	1.60167	1.60167	0.010	-9.87535	50.00000	Averaged
27 1,4-Dichlorobenzene	1.43491	1.60553	1.60553	0.010	-11.89033	20.00000	Averaged
28 1,2-Dichlorobenzene	1.39157	1.56582	1.56582	0.010	-12.52192	50.00000	Averaged
29 Benzyl Alcohol	0.87154	0.93233	0.93233	0.010	-6.97469	50.00000	Averaged
30 2-Methylphenol	1.23048	1.42687	1.42687	0.010	-15.95971	50.00000	Averaged
31 bis(2-Chloroisopropyl)ether	1.97503	2.43724	2.43724	0.010	-23.40265	50.00000	Averaged
37 Acetophenone	1.95481	2.27636	2.27636	0.010	-16.44928	50.00000	Averaged
32 N-Nitroso-di-n-propylamine	1.22593	1.46849	1.46849	0.050	-19.78546	50.00000	Averaged
192 4-Methylphenol	1.30996	1.48156	1.48156	0.010	-13.09964	50.00000	Averaged
34 Hexachloroethane	0.58431	0.64340	0.64340	0.010	-10.11261	50.00000	Averaged
35 Nitrobenzene	0.40028	0.43910	0.43910	0.010	-9.69851	50.00000	Averaged
41 Isophorone	0.73892	0.84653	0.84653	0.010	-14.56218	50.00000	Averaged
42 2-Nitrophenol	0.17538	0.20261	0.20261	0.010	-15.53202	20.00000	Averaged
43 2,4-Dimethylphenol	0.35503	0.41496	0.41496	0.010	-16.87982	50.00000	Averaged
44 bis(2-Chloroethoxy)methane	0.39587	0.45673	0.45673	0.010	-15.37521	50.00000	Averaged
46 2,4-Toluenediamene	0.22988	0.17251	0.17251	0.010	24.95384	50.00000	Averaged
47 1,3,5-Trichlorobenzene	0.27147	0.30730	0.30730	0.010	-13.20105	50.00000	Averaged
48 2,4-Dichlorophenol	0.24145	0.27750	0.27750	0.010	-14.93141	20.00000	Averaged
49 Benzoic Acid	10.00000	8.53467	0.21312	0.010	14.65330	0.000e+000	Quadratic
50 1,2,4-Trichlorobenzene	0.26915	0.29493	0.29493	0.010	-9.57690	50.00000	Averaged
51 Naphthalene	1.06810	1.19494	1.19494	0.010	-11.87521	50.00000	Averaged
52 4-Chloroaniline	0.49106	0.54718	0.54718	0.010	-11.42748	50.00000	Averaged
56 Hexachlorobutadiene	0.13028	0.14134	0.14134	0.010	-8.48954	20.00000	Averaged
210 Caprolactam	0.11920	0.13258	0.13258	0.010	-11.22483	50.00000	Averaged
57 1,2,3-Trichlorobenzene	0.25119	0.27815	0.27815	0.010	-10.73440	50.00000	Averaged
59 4-Chloro-3-Methylphenol	0.30893	0.34540	0.34540	0.010	-11.80496	20.00000	Averaged
62 2-Methylnaphthalene	0.58704	0.67031	0.67031	0.010	-14.18535	50.00000	Averaged
63 1-Methylnaphthalene	0.67554	0.76871	0.76871	0.010	-13.79201	50.00000	Averaged
64 Hexachlorocyclopentadiene	5.00000	4.72104	0.26810	0.050	5.57917	0.000e+000	Quadratic
66 2,4,6-Trichlorophenol	0.28393	0.30403	0.30403	0.010	-7.07925	20.00000	Averaged
67 2,4,5-Trichlorophenol	0.30173	0.33878	0.33878	0.010	-12.28147	50.00000	Averaged
211 1,1'-Biphenyl	1.48947	1.72166	1.72166	0.010	-15.58888	50.00000	Averaged
68 1,2,3,5-Tetrachlorobenzene	0.40162	0.44832	0.44832	0.010	-11.62763	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 10-MAR-2011 09:35
Lab File ID: 2SMH0310.D Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Analysis Type: Init. Cal. Times: 12:03 19:23
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10310A.b\8270C-625.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
70 2-Chloronaphthalene	1.06133	1.17441	1.17441	0.010	-10.65482	50.00000	Averaged
73 2-Nitroaniline	0.45574	0.50774	0.50774	0.010	-11.41006	50.00000	Averaged
74 1,2,3,4-Tetrachlorobenzene	0.37357	0.41845	0.41845	0.010	-12.01371	50.00000	Averaged
76 Dimethylphthalate	1.29569	1.42946	1.42946	0.010	-10.32382	50.00000	Averaged
78 2,6-Dinitrotoluene	0.28070	0.31646	0.31646	0.010	-12.74075	50.00000	Averaged
79 Acenaphthylene	1.86047	2.05923	2.05923	0.010	-10.68378	50.00000	Averaged
80 1,2-Dinitrobenzene	0.13797	0.15420	0.15420	0.010	-11.76313	50.00000	Averaged
81 3-Nitroaniline	0.37667	0.41144	0.41144	0.010	-9.23125	50.00000	Averaged
82 Acenaphthene	1.15965	1.29219	1.29219	0.010	-11.42908	20.00000	Averaged
83 2,4-Dinitrophenol	10.00000	8.01916	0.17215	0.050	19.80843	0.000e+000	Quadratic
85 4-Nitrophenol	5.00000	5.29045	0.21459	0.050	-5.80897	0.000e+000	Quadratic
86 Dibenzofuran	1.54774	1.70528	1.70528	0.010	-10.17862	50.00000	Averaged
87 2,4-Dinitrotoluene	0.38188	0.42766	0.42766	0.010	-11.98820	50.00000	Averaged
91 2,3,5,6-Tetrachlorophenol	0.21835	0.22285	0.22285	0.010	-2.06043	50.00000	Averaged
93 Diethylphthalate	1.40182	1.55597	1.55597	0.010	-10.99587	50.00000	Averaged
94 Fluorene	1.31906	1.48356	1.48356	0.010	-12.47095	50.00000	Averaged
95 4-Chlorophenyl-phenylether	0.51029	0.56500	0.56500	0.010	-10.72206	50.00000	Averaged
96 4-Nitroaniline	0.40503	0.43886	0.43886	0.010	-8.35039	50.00000	Averaged
98 4,6-Dinitro-2-methylphenol	5.00000	3.89901	0.09721	0.010	22.01975	0.000e+000	Quadratic
99 N-Nitrosodiphenylamine	0.67379	0.75827	0.75827	0.010	-12.53820	20.00000	Averaged
100 1,2-Diphenylhydrazine	0.99326	1.12679	1.12679	0.010	-13.44349	50.00000	Averaged
106 4-Bromophenyl-phenylether	0.16415	0.18342	0.18342	0.010	-11.73944	50.00000	Averaged
107 Hexachlorobenzene	0.16705	0.17835	0.17835	0.010	-6.76516	50.00000	Averaged
212 Atrazine	0.19613	0.21492	0.21492	0.010	-9.57809	50.00000	Averaged
111 Pentachlorophenol	10.00000	8.78181	0.10765	0.010	12.18186	0.000e+000	Quadratic
115 Phenanthrene	1.17359	1.31395	1.31395	0.010	-11.95924	50.00000	Averaged
116 Anthracene	1.15604	1.31539	1.31539	0.010	-13.78403	50.00000	Averaged
119 Carbazole	1.14550	1.26422	1.26422	0.010	-10.36331	50.00000	Averaged
120 Di-n-Butylphthalate	1.43615	1.71855	1.71855	0.010	-19.66362	50.00000	Averaged
123 Fluoranthene	1.09774	1.22571	1.22571	0.010	-11.65760	20.00000	Averaged
124 Benzidine	0.90636	0.78330	0.78330	0.010	13.57760	50.00000	Averaged
125 Pyrene	1.28716	1.40621	1.40621	0.010	-9.24923	50.00000	Averaged
131 Butylbenzylphthalate	0.75773	0.80391	0.80391	0.010	-6.09483	50.00000	Averaged
133 3,3'-Dimethoxybenzidine	0.29401	0.24617	0.24617	0.010	16.26892	50.00000	Averaged
135 3,3'-Dichlorobenzidine	0.46841	0.48885	0.48885	0.010	-4.36369	50.00000	Averaged
136 Benzo(a)Anthracene	1.08485	1.19787	1.19787	0.010	-10.41770	50.00000	Averaged
137 Chrysene	1.00780	1.10946	1.10946	0.010	-10.08773	50.00000	Averaged
138 4,4'-Methylene bis(o-chloro	0.24384	0.25408	0.25408	0.010	-4.20262	50.00000	Averaged
139 bis(2-ethylhexyl)Phthalate	1.07454	1.18484	1.18484	0.010	-10.26450	50.00000	Averaged
140 Di-n-octylphthalate	1.90198	2.27266	2.27266	0.010	-19.48957	20.00000	Averaged
141 Benzo(b)fluoranthene	1.21596	1.29558	1.29558	0.010	-6.54775	50.00000	Averaged
142 Benzo(k)fluoranthene	1.25164	1.46185	1.46185	0.010	-16.79392	50.00000	Averaged

TestAmerica North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a4ag2.i Injection Date: 10-MAR-2011 09:35
Lab File ID: 2SMH0310.D Init. Cal. Date(s): 07-MAR-2011 07-MAR-2011
Analysis Type: Init. Cal. Times: 12:03 19:23
Lab Sample ID: L6 Quant Type: ISTD
Method: \\cansvr11\dd\chem\MSS\a4ag2.i\10310A.b\8270C-625.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
146 Benzo(a)pyrene	1.11860	1.24008	1.24008	0.010	-10.85943	20.00000	Averaged
149 Indeno(1,2,3-cd)pyrene	1.19450	1.34804	1.34804	0.010	-12.85451	50.00000	Averaged
150 Dibenz(a,h)anthracene	0.99522	1.15811	1.15811	0.010	-16.36629	50.00000	Averaged
151 Benzo(g,h,i)perylene	0.96064	1.08846	1.08846	0.010	-13.30585	50.00000	Averaged
$ 154 Nitrobenzene-d5	0.43811	0.44747	0.44747	0.010	-2.13829	50.00000	Averaged
$ 155 2-Fluorobiphenyl	1.21681	1.33760	1.33760	0.010	-9.92687	50.00000	Averaged
$ 156 Terphenyl-d14	0.69219	0.77487	0.77487	0.010	-11.94488	50.00000	Averaged
$ 157 Phenol-d5	1.61165	1.82821	1.82821	0.010	-13.43763	50.00000	Averaged
$ 158 2-Fluorophenol	1.23239	1.26170	1.26170	0.010	-2.37866	50.00000	Averaged
$ 159 2,4,6-Tribromophenol	0.10764	0.10862	0.10862	0.010	-0.91066	50.00000	Averaged
$ 186 2-Chlorophenol-d4	1.24129	1.37123	1.37123	0.010	-10.46843	50.00000	Averaged
$ 187 1,2-Dichlorobenzene-d4	0.87576	0.97876	0.97876	0.010	-11.76168	50.00000	Averaged
M 195 Cresols, total	2.54044	2.90842	2.90842	0.010	-14.48489	50.00000	Averaged
101 Diphenylamine	0.67379	0.75827	0.75827	0.010	-12.53820	50.00000	Averaged

SW846 8270C METHOD BLANK SUMMARY

BLANK WORKORDER NO.: ME8KH1AA

Lab Name: TestAmerica Laboratories, Inc.

Lab Code: TALCAN SDG Number:

Lab File ID: ME8KH1AA. Lot Number: A1C040534

Date Analyzed: 03/09/11 Time Analyzed: 12:56

Matrix: WATER Date Extracted:03/05/11

GC Column: DB-5.625 ID: .18 Extraction Method: 3520C

Instrument ID: AG2 Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	MSA-SW38-030311	ME7571AC	ME7571AC.	03/10/11	19:46
02	MSA-SW40-030311	ME76H1AN	ME76H1AN.	03/10/11	20:03
03	MSA-SW41-030311	ME76P1AN	ME76P1AN.	03/10/11	20:20
04	CHECK SAMPLE	ME8KH1AC C	ME8KH1AC.	03/09/11	10:23
05	DUPLICATE CHECK	ME8KH1AD L	ME8KH1AD.	03/09/11	10:40
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COMMENTS:

FORM IV

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: A1C040534 **Work Order #...:** ME8KH1AA **Matrix.....:** WATER
MB Lot-Sample #: A1C040000-310

Prep Date.....: 03/05/11 **Final Wgt/Vol..:** 2 mL
Analysis Date..: 03/09/11 **Prep Batch #...:** 1063310
Dilution Factor: 1 **Initial Wgt/Vol:** 1000 mL

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
1,4-Dioxane	ND	1.0	ug/L	SW846 8270C
Acenaphthene	ND	0.20	ug/L	SW846 8270C
Acenaphthylene	ND	0.20	ug/L	SW846 8270C
Anthracene	ND	0.20	ug/L	SW846 8270C
Benzo(a)anthracene	ND	0.20	ug/L	SW846 8270C
Benzo(a)pyrene	ND	0.20	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	0.20	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	0.20	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	0.20	ug/L	SW846 8270C
Chrysene	ND	0.20	ug/L	SW846 8270C
Dibenzo(a,h)anthracene	ND	0.20	ug/L	SW846 8270C
Fluoranthene	ND	0.20	ug/L	SW846 8270C
Fluorene	ND	0.20	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	0.20	ug/L	SW846 8270C
Naphthalene	ND	0.20	ug/L	SW846 8270C
Phenanthrene	ND	0.20	ug/L	SW846 8270C
Pyrene	ND	0.20	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	50	(27 - 111)
2-Fluorobiphenyl	51	(28 - 110)
Terphenyl-d14	67	(37 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A1C040534 Work Order #...: ME8KH1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: A1C040000-310 ME8KH1AD-LCSD
Prep Date.....: 03/05/11 Analysis Date..: 03/09/11
Prep Batch #...: 1063310
Dilution Factor: 1 Final Wgt/Vol..: 2 mL
Initial Wgt/Vol: 1000 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	70	(40 - 110)			SW846 8270C
	64	(40 - 110)	8.7	(0-30)	SW846 8270C
1,2,4-Trichloro-benzene	59	(25 - 110)			SW846 8270C
	54	(25 - 110)	8.5	(0-30)	SW846 8270C
2,4-Dinitrotoluene	76	(52 - 123)			SW846 8270C
	71	(52 - 123)	7.1	(0-30)	SW846 8270C
N-Nitrosodi-n-propyl-amine	66	(37 - 121)			SW846 8270C
	61	(37 - 121)	7.8	(0-30)	SW846 8270C
1,4-Dichlorobenzene	57	(19 - 110)			SW846 8270C
	52	(19 - 110)	8.5	(0-30)	SW846 8270C
Pentachlorophenol	35	(26 - 110)			SW846 8270C
	34	(26 - 110)	4.0	(0-30)	SW846 8270C
Phenol	76	(14 - 112)			SW846 8270C
	69	(14 - 112)	9.4	(0-30)	SW846 8270C
2-Chlorophenol	76	(27 - 110)			SW846 8270C
	68	(27 - 110)	11	(0-30)	SW846 8270C
4-Chloro-3-methylphenol	74	(39 - 110)			SW846 8270C
	69	(39 - 110)	8.0	(0-30)	SW846 8270C
Pyrene	70	(55 - 120)			SW846 8270C
	64	(55 - 120)	9.8	(0-30)	SW846 8270C
4-Nitrophenol	66	(12 - 130)			SW846 8270C
	63	(12 - 130)	5.4	(0-30)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Nitrobenzene-d5	67	(27 - 111)
	61	(27 - 111)
2-Fluorobiphenyl	68	(28 - 110)
	63	(28 - 110)
Terphenyl-d14	81	(37 - 119)
	73	(37 - 119)
Phenol-d5	75	(10 - 110)
	69	(10 - 110)
2-Fluorophenol	73	(10 - 110)
	67	(10 - 110)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: A1C040534 **Work Order #...:** ME8KH1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: A1C040000-310 ME8KH1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2,4,6-Tribromophenol	70	(22 - 120)
	66	(22 - 120)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID (Standard): 2SMH0309 Date Analyzed: 03/09/11

Instrument ID: A4AG2 Time Analyzed: 0932

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	291550		3.40		1149095		4.29		676781		5.56	
	UPPER LIMIT	583100		3.90		2298190		4.79		1353562		6.06	
	LOWER LIMIT	145775		2.90		574548		3.79		338391		5.06	
	EPA SAMPLE NO.												
01	ME8KHCHK	241993		3.40		976052		4.29		570163		5.56	
02	ME8KHCKDUP	240499		3.40		956649		4.29		552903		5.56	
03	ME8KHBLK	267256		3.40		1041320		4.29		585887		5.56	
04													
05													
06													
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID (Standard): 2SMH0309 Date Analyzed: 03/09/11

Instrument ID: A4AG2 Time Analyzed: 0932

		IS4 (PHN) AREA	#	RT	#	IS5 (CRY) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD	1060899		6.64		980465		8.60		836727		9.90	
	UPPER LIMIT	2121798		7.14		1960930		9.10		1673454		10.40	
	LOWER LIMIT	530450		6.14		490233		8.10		418364		9.40	
	EPA SAMPLE NO.												
01	ME8KHCHK	878532		6.64		794813		8.59		673155		9.89	
02	ME8KHCKDUP	866774		6.64		782643		8.60		675465		9.89	
03	ME8KHBLK	914267		6.64		846103		8.60		744551		9.90	
04													
05													
06													
07													
08													
09													
10													
11													
12													
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14													
15													
16													
17													
18													
19													
20													
21													
22													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID (Standard): 2SMH0310 Date Analyzed: 03/10/11

Instrument ID: A4AG2 Time Analyzed: 0935

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	276064	3.42	1130433	4.31	666467	5.58
	UPPER LIMIT	552128	3.92	2260866	4.81	1332934	6.08
	LOWER LIMIT	138032	2.92	565217	3.81	333234	5.08
	EPA SAMPLE NO.						
01	MSA-SW38-030	196639	3.42	832529	4.32	579867	5.59
02	MSA-SW40-030	213554	3.42	907324	4.32	615936	5.59
03	MSA-SW41-030	200340	3.42	897440	4.32	590334	5.59
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: NORTH CANTON Contract:

Lab Code: TACAN Case No.: SAS No.: SDG No.: A1C040534

Lab File ID (Standard): 2SMH0310 Date Analyzed: 03/10/11

Instrument ID: A4AG2 Time Analyzed: 0935

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1046361	6.67	951941	8.63	814387	9.95
	UPPER LIMIT	2092722	7.17	1903882	9.13	1628774	10.45
	LOWER LIMIT	523181	6.17	475971	8.13	407194	9.45
	EPA SAMPLE NO.						
01	MSA-SW38-030	996122	6.68	918472	8.65	809594	9.98
02	MSA-SW40-030	1048001	6.68	1006035	8.65	872230	9.98
03	MSA-SW41-030	993395	6.68	967559	8.63	833731	9.97
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

North Canton

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/22/2011
Time: 8:43:41

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

Extractionist: 404000 Chris Coast

Concentrationist: 402608 Eric Mills
000123 Leslie Howell

Reviewer/Date: JONESD / 3/07/11

QC BATCH: 1063310

PREP DATE: 3/05/11
COMP DATE: 3/06/11

Base/Neutrals and Acids (8270C)
LIQ/LIQ, CONT (Acids,Phenols) - Acid
SW846 3520C

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/10/11	3/18/11	A1C040534-005 **ME76H-1-AN**	D	51	QL	WATER	960mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/10/11	3/18/11	A1C040534-006 **ME76P-1-AN**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/09/11	0/0/0	A1C040000-310 **ME8KH-1-AA B**		51	QL	WATER	1000mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/10/11	3/10/11	A1C040503-027 **ME709-1-AC**	B	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/10/11	3/10/11	A1C040503-028 **ME71E-1-AC**	B	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 1063310

PREP DATE: 3/05/11
COMP DATE: 3/06/11

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/09/11	0/0/0	A1C040000-310 **ME8KH-1-AC C**		51	QL	WATER	1000mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML #A079095/79132 .2ML BNA SURR #78922
COMMENTS:															
3/10/11	3/10/11	A1C040503-030 **ME71J-1-AC**	B	51	QL	WATER	1030mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/10/11	3/18/11	A1C040534-003 **ME757-1-AC**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/09/11	3/16/11	A1C030579-003 **ME6FD-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/09/11	3/16/11	A1C030579-006 **ME6FL-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/09/11	3/16/11	A1C030579-001 **ME6E4-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/09/11	3/16/11	A1C030579-002 **ME6FC-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/10/11	3/10/11	A1C040503-026 **ME703-1-AC**	B	51	QL	WATER	1000mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															
3/09/11	3/16/11	A1C030579-004 **ME6FG-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	.2ML BNA SURR #78922
COMMENTS:															

TestAmerica Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 1063310

PREP DATE: 3/05/11
COMP DATE: 3/06/11

EXTR EXPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/09/11	3/16/11	A1C030579-005 **ME6FH-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	
COMMENTS:														.2ML	BNA SURR #78922
3/10/11	3/10/11	A1C040503-029 **ME71F-1-AC**	B	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	
COMMENTS:														.2ML	BNA SURR #78922
3/10/11	3/16/11	A1C030579-007 **ME6FQ-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	
COMMENTS:														.2ML	BNA SURR #78922
3/10/11	3/16/11	A1C030582-001 **ME6GJ-1-AA**	D	51	QL	WATER	1050mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	
COMMENTS:														.2ML	BNA SURR #78922
3/09/11	0/0/0	A1C040000-310 **ME8KH-1-AD L**		51	QL	WATER	1000mL 2.00mL	7.0	2	NA	DCM	250.0		0.0	
COMMENTS:														.2ML	#A079095/79132
														.2ML	BNA SURR #78922

S/S CC

DCM #J52J01 NA2SO4 #J36591 1:1 #J09F01

NUMBER OF WORK ORDERS IN BATCH: 19

4-4-11
JAD

SAMPLE ID MSA-SW38-030311

SAMPLE CALC

IS AREA	DILUTION	COMPOUND OF INTEREST	IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	CONCENTRATION PPB
196639	1	42303	2	2000	0.6203	2.64
			Amt. inj	Sample Volume (UL)		
			0.5	1050 mL		

1,4-dioxane = 2.6 ug/L

TestAmerica North Canton

Semivolatile REPORT SW-846 Method 8270

Data file : \\cansvr11\dd\chem\MSS\a4ag2.i\10310A.b\ME7571AC.D
Lab Smp Id: ME7571AC Client Smp ID: MSA-SW38-030311
Inj Date : 10-MAR-2011 19:46
Operator : 046900 Inst ID: a4ag2.i
Smp Info : ME7571AC,10310A.B,8270C-625,PAHD.SUB
Misc Info :
Comment :
Method : \\cansvr11\dd\chem\MSS\a4ag2.i\10310A.b\8270C-625.m
Meth Date : 11-Mar-2011 12:56 hulat Quant Type: ISTD
Cal Date : 07-MAR-2011 19:23 Cal File: 2TL0307.D
Als bottle: 38
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PAHD.SUB
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	2000.000	Volume of final extract (uL)
Vo	1050.000	Volume of sample extracted (mL)
Vi	0.50000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	
* 1	1,4-Dichlorobenzene-d4	152	3.420	3.419	(1.000)	196639	2.00000		(Q)
* 2	Naphthalene-d8	136	4.318	4.313	(1.000)	832529	2.00000		
* 3	Acenaphthene-d10	164	5.586	5.580	(1.000)	579867	2.00000		
* 4	Phenanthrene-d10	188	6.677	6.666	(1.000)	996122	2.00000		
* 5	Chrysene-d12	240	8.645	8.634	(1.000)	918472	2.00000		
* 6	Perylene-d12	264	9.977	9.950	(1.000)	809594	2.00000		
198	1,4-Dioxane	88	1.590	1.606	(0.465)	42303	0.69364	2.6424	
51	Naphthalene	128	Compound Not Detected.						
62	2-Methylnaphthalene	142	Compound Not Detected.						
63	1-Methylnaphthalene	142	Compound Not Detected.						
79	Acenaphthylene	152	Compound Not Detected.						
82	Acenaphthene	153	Compound Not Detected.						
94	Fluorene	166	Compound Not Detected.						
107	Hexachlorobenzene	284	Compound Not Detected.						
115	Phenanthrene	178	Compound Not Detected.						
116	Anthracene	178	Compound Not Detected.						
123	Fluoranthene	202	Compound Not Detected.						
125	Pyrene	202	Compound Not Detected.						
136	Benzo(a)Anthracene	228	Compound Not Detected.						

APPENDIX C—CHEMICAL RESULTS DATA TABLE

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
VOLATILES (ug/l)					
1,1,1,2-TETRACHLOROETHANE		0.92 U		0.23 U	0.23 U
1,1,1-TRICHLOROETHANE		0.88 U		0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE		0.72 U		0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE		1.1 U		0.28 U	0.28 U
1,1-DICHLOROETHANE		0.6 U		0.15 U	0.15 U
1,1-DICHLOROETHENE		1.4 J		0.19 U	0.21 J
1,1-DICHLOROPROPENE		0.52 U		0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE		0.68 U		0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE		1.7 U		0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE		0.024 U		0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE		1.2 J		0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE		0.48 U		0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE		2.7 U		0.67 U	0.67 U
1,2-DIBROMOETHANE		0.96 U		0.24 U	0.24 U
1,2-DICHLOROBENZENE		0.52 U		0.13 U	0.13 U
1,2-DICHLOROETHANE		0.88 U		0.22 U	0.22 U
1,2-DICHLOROPROPANE		0.72 U		0.18 U	0.18 U
1,3-DICHLOROBENZENE		0.56 U		0.14 U	0.14 U
1,3-DICHLOROPROPANE		0.64 U		0.16 U	0.16 U
1,4-DICHLOROBENZENE		3.9 J		0.13 U	0.38 J
2,2-DICHLOROPROPANE		0.52 U		0.13 U	0.13 U
2-BUTANONE		2.3 U		0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER		4 U		0.99 U	0.99 U
2-CHLOROTOLUENE		0.44 U		0.11 U	0.11 U
2-HEXANONE		1.6 U		0.41 U	0.41 U

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
4-CHLOROTOLUENE		0.72 U		0.18 U	0.18 U
4-ISOPROPYLTOLUENE		0.48 U		0.12 U	0.12 U
4-METHYL-2-PENTANONE		1.3 U		0.32 U	0.32 U
ACETONE		4.4 U		1.1 U	5.7 B
BENZENE		0.52 U		0.13 U	0.13 U
BROMOBENZENE		0.52 U		0.13 U	0.13 U
BROMOCHLOROMETHANE		1.2 U		0.29 U	0.29 U
BROMODICHLOROMETHANE		0.6 U		0.15 U	0.15 U
BROMOFORM		2.6 U		0.64 U	0.64 U
BROMOMETHANE		1.6 U		0.41 U	0.41 U
CARBON DISULFIDE		0.52 U		0.13 U	0.13 U
CARBON TETRACHLORIDE		0.52 U		0.13 U	0.13 U
CHLOROBENZENE		0.6 U		0.15 U	0.15 U
CHLORODIBROMOMETHANE		0.72 U		0.18 U	0.18 U
CHLOROETHANE		1.2 U		0.29 U	0.29 U
CHLOROFORM		0.64 U		0.16 U	0.16 U
CHLOROMETHANE		1.2 U		0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE		130		5.5	21
CIS-1,3-DICHLOROPROPENE		0.56 U		0.14 U	0.14 U
DIBROMOMETHANE		1.1 U		0.28 U	0.28 U
DICHLORODIFLUOROMETHANE		1.2 U		0.31 U	0.31 U
DIISOPROPYL ETHER		6 U		1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER		0.44 U		0.11 U	0.11 U
ETHYLBENZENE		1.9 J		0.17 U	0.23 J
HEXACHLOROBUTADIENE		1.2 U		0.3 U	0.3 U
ISOPROPYLBENZENE		0.52 U		0.13 U	0.13 U

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
M+P-XYLENES		14		0.24 U	1.6 J
METHYL TERT-BUTYL ETHER		0.68 U		0.17 U	0.17 U
METHYLENE CHLORIDE		1.3 U		0.33 U	0.33 U
NAPHTHALENE		0.96 U		0.24 U	0.24 U
N-BUTYLBENZENE		0.48 U		0.12 U	0.12 U
N-PROPYLBENZENE		0.56 U		0.14 U	0.14 U
O-XYLENE		2.8 J		0.14 U	0.29 J
SEC-BUTYLBENZENE		0.52 U		0.13 U	0.13 U
STYRENE		0.44 U		0.11 U	0.11 U
TERT-AMYL METHYL ETHER		0.27 U		0.067 U	0.067 U
TERT-BUTYLBENZENE		0.52 U		0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL		16 UR		3.9 UR	3.9 UR
TETRACHLOROETHENE		1.2 U		0.29 U	0.29 U
TOLUENE		1.4 J		0.13 U	0.13 U
TOTAL XYLENES		16		0.28 U	1.9 J
TRANS-1,2-DICHLOROETHENE		0.87 J		0.19 U	0.2 J
TRANS-1,3-DICHLOROPROPENE		0.76 U		0.19 U	0.19 U
TRICHLOROETHENE		32		4.2	24
TRICHLOROFLUOROMETHANE		0.84 U		0.21 U	0.21 U
VINYL ACETATE		0.76 U		0.19 U	0.19 U
VINYL CHLORIDE		140		1.8	8.7
SEMIVOLATILES (ug/l)					
1,4-DIOXANE		2.6		0.49 J	0.49 U
POLYCYCLIC AROMATIC HYDROCARBONS (ug/l)					
ACENAPHTHENE		0.1 U		0.1 U	0.1 U
ACENAPHTHYLENE		0.1 U		0.1 U	0.1 U

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
ANTHRACENE		0.1 U		0.1 U	0.1 U
BENZO(A)ANTHRACENE		0.1 U		0.1 U	0.1 U
BENZO(A)PYRENE		0.1 U		0.1 U	0.1 U
BENZO(B)FLUORANTHENE		0.1 U		0.1 U	0.1 U
BENZO(G,H,I)PERYLENE		0.1 U		0.1 U	0.1 U
BENZO(K)FLUORANTHENE		0.1 U		0.1 U	0.1 U
CHRYSENE		0.1 U		0.1 U	0.1 U
DIBENZO(A,H)ANTHRACENE		0.1 U		0.1 U	0.1 U
FLUORANTHENE		0.1 U		0.1 U	0.1 U
FLUORENE		0.1 U		0.1 U	0.1 U
INDENO(1,2,3-CD)PYRENE		0.1 U		0.1 U	0.1 U
NAPHTHALENE		0.1 U		0.1 U	0.1 U
PHENANTHRENE		0.1 U		0.1 U	0.1 U
PYRENE		0.1 U		0.1 U	0.1 U
TOTAL METALS (ug/l)					
ANTIMONY	0.65 UL	0.65 UL	0.65 UL	0.65 UL	0.65 UL
ARSENIC	2.1 J	3.6 J	3.3 J	3.7 J	3.4 J
BARIUM	58.4	54	49.3	52.5	53.3
BERYLLIUM	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.65 U	1.2 J	0.65 U	0.65 U	0.65 U
CHROMIUM	4.5 J	7.1 J	3.6 U	4.5 J	3.6 U
COBALT	2 J	5.4	2.2 J	1.9 J	2.2 J
COPPER	16	19.5	7.6 B	18.1	7 B
IRON	1670	2760	570	1490	675
LEAD	5.5	6.3	1.5 J	4.3 J	1.7 J
MANGANESE	112	311	131	139	136

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
MERCURY	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.3 J	1.3 J	1.2 J	1.2 J	1.3 J
NICKEL	3.2 J	5 J	3.5 J	3.2 J	2.6 J
SELENIUM	6 U	6 U	6 U	6 U	6 U
SILVER	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
THALLIUM	0.7 UL	0.7 UL	0.7 UL	0.7 UL	0.7 UL
VANADIUM	2.9 J	5.2 J	2.2 U	3.5 J	2.2 U
ZINC	41.2 B	51.4 B	24.1 B	33.4 B	29.9 B
FILTERED METALS (ug/l)					
ANTIMONY	0.65 UL	0.65 UL	0.65 UL	0.65 UL	0.65 UL
ARSENIC	2.6 J	2.7 J	2.6 J	3 J	2.7 J
BARIUM	30	22.2	17.9 B	15.6 B	18.2 B
BERYLLIUM	1 U	1 U	1 U	1 U	1 U
CADMIUM	0.65 U	0.86 J	0.65 U	0.65 U	0.65 U
CHROMIUM	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
COBALT	1.4 J	3.6 J	1.6 J	0.98 J	2.2 J
COPPER	6.8 B	4.1 B	3.5 B	5.8 B	4.3 B
IRON	130 U	130 U	130 U	130 U	130 U
LEAD	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U
MANGANESE	109	253	114	67.4	161
MERCURY	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.6 J	1.3 J	1.2 J	1 J	1.6 J
NICKEL	2.6 J	2.9 J	2.5 J	2.3 J	3.4 J
SELENIUM	6 U	6 U	6 U	6 U	6 U
SILVER	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
THALLIUM	0.7 UL	0.7 UL	0.7 UL	0.7 UL	0.7 UL

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
TUNGSTEN					
VANADIUM	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
ZINC	18.1 B	20.1 B	14.8 B	24 B	21.2 B

TABLE C-1

CHEMICAL ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES, MARCH 2011
FROG MORTAR CREEK
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID:	MSA-SW37-030311	MSA-SW38-030311	MSA-SW39-030311	MSA-SW40-030311	MSA-SW41-030311
LABORATORY ID:	A1C040534002	A1C040534003	A1C040534004	A1C040534005	A1C040534006
LOCATION:	MSA-SW37	MSA-SW38	MSA-SW39	MSA-SW40	MSA-SW41
SAMPLE DATE:	3/3/2011	3/3/2011	3/3/2011	3/3/2011	3/3/2011
MISCELLANEOUS (ug/l)					
HEXAVALENT CHROMIUM	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
PERCHLORATE		0.72 U		0.72 U	0.72 U

U- Not detected at the method detection limit shown left of the letter.
B - Result is attributed to laboratory blank contamination per USEPA validation rules.
J - Result is considered estimated.
L - Positive result or detection limit is considered biased low due to technical noncompliance.
R - Result is rejected due to technical noncompliance.
ug/l - micrograms per liter.
Blank cell indicates analysis was not performed for the sample.